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A

Atkinson, W. G. — Esq. Post Office Box 89, Newburgh, New York. page 1. 34.

Allen, R. H. — Esq. Care of Messrs. R. H. Allen & Co. Box 376, Post Office, New York. page (Prof.) 57. 55. 63. 132. 169.

Anable, Miss — , South East Corner of Broad & Pine Streets, Philadelphia, page. 76.

Averell, Genl. Wm. W. Averell, Care of Messrs. Grant & Sons, No. 33 Wall St. New York City. page 261.

Brewer, Miss Fanny —, Northampton, Massachusetts. page 22. 65.

Barber, Wm. — Esq. No. 321 Geary Street, San Francisco, Cal. p. 233

Bourinot, Marshall — Esq. Sydney, Cape Breton, Nova Scotia, p. 23[illegible]

Bowles, Messrs Saml. — & Co. Publishers of the Springfield Republican, Springfield, Massachusetts. page 242.

Bossler, For Mr. — Letter Carrier for Fifth & Walnut Sts. at the Post Office Philadelphia, Pennsylvania, page 244.

Clarke, J. L. — Esq. Secretary of the Board of State Charities, State House, Boston, Massachusetts. page 16.

Clarke, Rev. James Freeman —, Jamaica Plain, near Boston, Massachusetts. page 140.

Coxe, Eckley B. — Esq. Drifton, Jeddo Post Office, Luzerne County, Pennsylvania. page 179.

B
C

Delano, Warren — Esq. No. 55 Broadway, (Box 1078 P.O.) New York City. page 2. 14. 27. 36. 9.
p. 121. 129. 133. 141. 143. 148. 149. 176. 180. 241.

Delano, F. H. — Esq., Post Office Box 1078, No. 55 Broadway, New York City. page 163. 168. 172. 181.

Edwards, A—, Esq. Box No. 1. Post Office, Montgomery, Alabama, p. 12. 26.
p. 46. 61. 78. 81. 82. 83. 92. (Report on Black Lead) 96. 107. 120. 135. 136
p. 232.

Engineering and Mining Journal, the, No. 37 Park Row, New York city. page 267.

D
E

Faucon, Felix Esq., Fifth Avenue Hotel, New York City. page 161. 169. 253.
(Clifton Springs, New York) p. 280.
Franklin Institute, For the Journal of the — page 225.

Gordon, C. C. — Esq., Architectural Iron Works, East 14th St., near Ave. B, New York City,
page 11. 13. 15. 18. 49. 50. 54. 75. 162. 177. 188. 207. 224. 257. 259. 260. 264. 265. 266. 275. 276. 277. 278.

Greene, Thomas F. — Esq. Care of Messrs. Ralston & Matthews, No. 133 Walnut Street, Philadelphia. page 77.

F
G

Howe, Edward R. — Esq., Pomeroy, Meigs County, Ohio. page 32, 90. (Care of Henry Howe Esq. Mason St. Cam[bridge] Mas[s].)

Haldeman, Prof. S. S. —, Columbia, Lancaster County, Pennsylvania. page 187.

Howe, Edward R. — Esq. Care of Messrs. B. Adolphe Low & Co., San Francisco, California. page 234. Care of Messrs. Barstow, Stetson & Houghton, No. 408 California Street, San Francisco, California. p. 281.

Henry, Prof. Joseph —, Secretary of the Smithsonian Institution, Washington, D. C. page 283.

Ingersoll, Charles — Esq. No. 572 Walnut Street, Philadelphia, page 62.

Jenks, P. W. — Esq., Punxsutawney, Jefferson County, Pennsylvania. page 67.

I
J

Lyman, Judge S. F. —, Northampton, Massachusetts. page 3. 79. 144. 174. 285. p. 285.
Lamborn, R. H. — Esq. No. 420 Walnut Street, Philadelphia. page 4.
Lyman, Miss Mary —, Care of Judge Lyman, Northampton, Massachusetts, page 7. 47. 68. 88. 130. 151. 156. 239. 262.
Lyman, Mrs. S. F. —, Northampton, Massachusetts. page 20. 52. 94. 134. 137. 170. p. 222. 243. 249.
Lesley, Prof. J. P. —, No. 104 South Fifth Street, Philadelphia, Penn^a. p. 28. 37. p. (Report on Bothwell) 40. 173.
Lyman, Miss C. D. —, No. 226 South Broad Street, Philadelphia, Penn^a. page 30.
Lesquereux, Leo — Esq., Columbus, Ohio. page 157. 167.
Lesley, Mrs. Susan I. —, Care of Mrs. Mary Cunningham, Milton Hill, near Boston, Massachusetts. page 159. 165. 185.
Lyman, James F. — Esq. ~~Care~~ Mutual Benefit Life Insurance Company, Newark, New Jersey, page 255. 256.
Lyman, Benjamin — Esq., Care of Messrs. Lymans, Clare & Co., Montreal, Canada. page. 279.

K
L

MacQueen, D. N. — Esq., Sydney, Cape Breton, Nova Scotia. page 10. 56.
Matthews, Charles, W. — Esq., No. 133 Walnut Street, Philadelphia Pennsylvania. page 84.
Miller, A. Edward — Esq., care of Mr. Field, ~~Corn~~ Front Street, corner of Walnut, Philadelphia; p. 293.

M
N

Ogden, C. H. — Esq. Care of Warren Delano Esq., No. 55 Broadway, (P.O. Box 1078)
New York City. page 64, 155.

Plummer, Mrs. M. W. —, Monrovia Depot, Baltimore & Ohio R.R.; Maryland, page 19.

Powel, Robert Hare — Esq. No. 104 Walnut Street, Philadelphia p. 70.

Postmaster, to the — at Montgomery, Alabama. page 139.

Patents, to the Commissioner of —, Washington, District of Columbia. p. 189. 231.

O

P

Raymond, R. W. — Esq., Editor of the American Journal of Mining, Box 5969. New York City. page 17.

Rothwell, R. P. — Esq., Mining Engineer, Wilkesbarre, Pennsylvania. page 178.

Q
R

Sanborn, F. B. — Esq. Office of the Springfield Republican, Springfield, Massachusetts. page 5. 38. 86. 146. 153. 175. 237. 245. 292.

Thoulet, ~~Abbé~~ Julian Esq., Care of R. P. Rothwell Esq., Wilkesbarre, Luzerne County, Pennsylvania, page 184.

Thornton, His Exc[y]. Edward Thornton, British Ambassador, &c. &c., Washington D. C. page 284. 287.

S
T

United States Rail Road and Mining Register, Philadelphia. p. 290.

Whitman, Wm. E. ~~H~~ — Esq., No. 133 South Fifth Street, Philadelphia Penna. page 29.

Witte Esq. (& F. Hughes Esq.) 209 South Sixth Street, Philadelphia. page (Report on Potomac Furnace Iron Lands) 108. (Bill) 128.

White, C. L. — Esq. Superintendent of the New Boston Colliery, Mahanoy City, Schuylkill Co., Penna. page 150.

Whom it may concern, To — page 158.

Wood, Richard D. — Esq., No. 4[illegible] Chestnut Street, Philadelphia, Pennsylvania. page 247.

Young, Messrs. Wm. J. & Co., ~~mathematical~~ Instrument makers, ~~North~~ Seventh Street, below Arch, Philadelphia, Pa. (Compass graduation) 58.85.

X
Y
Z

1

35 South Fifth Street Philadelphia, [illegible]

W. G. Atkinson Esq.
Newburgh, N. Y.

Dear Sir:

Your favor of day before yesterday is at hand and its proposals have been noted with care. They strike me favorably in many points; for I am aware that there is an immense deal of rich mineral lands in the South, and this seems to be the time of all others for speculators to buy them. But your idea seems rather to be that I should report upon lands offered for sale by you, or perhaps aid in picking out good tracts to bring into the market, and this in return for a share of your profits and commissions or a percentage on the sales. I have hitherto always avoided reporting on tracts for a share of the sales or profits, thinking that such an arrangement might unfairly prejudice the reports; but perhaps there would be no harm in it if it were understood by the buyers what the general nature of the arrangement was, for they could then judge for themselves by my character and reputation how far the reports might be biased. There is a vast number of tracts too in the South where no shade of exaggeration would be needed for a very favorable report, and these might be chosen rather than others. — I send you herewith a couple of photographs of my maps made to go with reports not as yet published, and a report of [illegible] that was printed three years ago, but of which I have no copy of the map to send. These will give you an idea of what I aim at in my reports and maps of the [illegible] I have made better ones since, that I cannot send [illegible] names [illegible] in [illegible] all the topographical, geological and [illegible] lands. I have ever thought it would be worth while to give more [illegible] of the water power and [illegible] timber based upon actual [illegible] wealth. [illegible] Benj. Smith Lyman.

[illegible]

[illegible] Street Philadelphia, May [illegible]

[illegible] Esq.
[illegible], N.Y.

Dear Sir:

Your favor of day before yesterday is at hand and its enclosures are read with much care. They strike me favorably in many respects; you are aware that there is an abundance of mineral lands in the South, and this seems to be the time [illegible] attention to them. But your idea seems to be that I should report upon lands offered for sale by you, or perhaps aid in picking out good tracts & bring into the market, and [illegible] for a share of your profit and commission on percentage on the sales. I have hitherto always avoided reporting [illegible] for a share of the sales or profits, thinking that such an arrangement might unfavorably prejudice the report; but perhaps there could be no harm in it if it were understood by the buyers [illegible] good [illegible] [illegible] [illegible] could then judge for themselves of any [illegible] and [illegible] the reports might be biased. There is a vast number of tracts [illegible] in the South where no doubt [illegible] would be [illegible] for a very favorable report, and there might be [illegible] [illegible] other. I send you [illegible] a couple of [illegible] [illegible] [illegible] with reports [illegible] and a report of [illegible] [illegible] [illegible] which I have no copy [illegible] [illegible] [illegible] [illegible] [illegible] I [illegible] [illegible] reports and [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

2

135 South 5th Street, Philadelphia, 7 April 1869.

[illegible] Esq.,

No. 55 Broadway, N. York.

My dear Sir:

Mr. [illegible] Atkinson of [illegible], [illegible] has written to me [illegible] some business overtures that may make it [illegible] for me to know more about him. If you [illegible] [illegible] anything of him, I would like to ask your advice [illegible] [illegible] to this city, if you should come before long, [illegible] when you were here. He seems to be [illegible] for the sale of real estate in the South [illegible].

I remain, as ever,

Very truly yours,

Benj: Smith Lyman.

[illegible]

[illegible] Street, Phila. [illegible]

Dear [illegible]:

Your favor of day before yesterday came duly to hand, and I [illegible] to thank you, at the same time, very much for the [illegible] of the check for the hundred dollars.

Mr. Delano was here yesterday and seemed in [illegible] [illegible] spirits than when he was here a fortnight ago. He [illegible] [illegible] again next week. He said the family [illegible] [illegible] [illegible] health when he left them on Monday.

To my [illegible] I have heard nothing yet from any [illegible] [illegible] [illegible]; but [illegible] [illegible] other business projects have [illegible] up in the mean time, so that I can hardly help [illegible] that something good will come out of some of them. One or two of them seem especially pleasing, and one of them is seemingly not unlikely to come to a head, and [illegible] the best of them all.

I shall send you within a few days a copy of [illegible] [illegible] of the American Journal of [illegible]. A translation from [illegible] that I made a month or more ago is coming out in it in three or four parts. The first part was in last Saturday's paper and the second will likely be in tomorrow's.

Trusting that your visit to Boston has been an encouraging one, and that [illegible] [illegible] will soon be fully restored to health; and hoping that you are all well,

I remain, as ever,

affectionately,

[illegible] Smith [illegible]

135 South Fifth Street, Philadelphia, Ap. 8 '67.

R. [illegible] Esq.,

No. 420 Walnut St.,
Philadelphia.

Dear Sir:

Mr. Koenig says that he is not able at present to entertain such a proposal as you spoke of to me the day before yesterday. He says, however, that he knows a [illegible] man in Heidelberg who, he thinks, would answer the desired purpose. [illegible] he is not willing [illegible] him [illegible] [illegible] like [illegible] write to [illegible] it. It is some one who [illegible] [illegible] unable to do so [illegible] retaining.

Yours truly,

Benj. [illegible]

105 South Fifth Street, Philadelphia; 1st April 1859.

[illegible]:

I send you this evening a [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] ments in the act of translating a week ago [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] with you; but am well aware [illegible] [illegible] [illegible] that time [illegible] [illegible] at most. Still, I [illegible] [illegible] [illegible] [illegible] hasty corrections made by the [illegible] [illegible] [illegible] [illegible] [illegible] restored the text of [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] all [illegible] [illegible] [illegible] [illegible] [illegible] in [illegible] [illegible] a widely [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. Two or three of [illegible] [illegible] [illegible] I had [illegible] [illegible] [illegible] any [illegible] [illegible] [illegible] [illegible] [illegible] done so; and [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] text of [illegible] it still [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] the [illegible] German of the two songs, [illegible] for your [illegible].

I felt highly flattered on discovering my [illegible] [illegible] in the [illegible] [illegible] [illegible] [illegible]. It is a [illegible] that the translation was written [illegible] [illegible] [illegible] [illegible] [illegible] for I had the [illegible], according to the [illegible] [illegible] [illegible] [illegible] [illegible] on the [illegible] as [illegible] [illegible] done.

I have to thank you very much for the [illegible] [illegible] of the [illegible] [illegible] [illegible] "[illegible]".

If you could just as well as not send me an extra copy of [illegible] [illegible] [illegible] [illegible] of any edition that [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]," I should be very much obliged to you. I would [illegible] [illegible] [illegible] friend Mr. [illegible] [illegible]; for he is [illegible] [illegible] [illegible] [illegible] with his wife and children [illegible], and is interested in [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. He thinks very favorably of [illegible] [illegible] from what I have already told him. If it is not quite conve- [illegible] [illegible] [illegible] [illegible] never mind about it.

[illegible] my best regards to your family and believe me as ever

Very affectionately yours. [illegible] [illegible].

[illegible] South Eighth Street, Philadelphia, [illegible] April

[illegible]

I was [illegible] to learn by your favor of last Sunday that the [illegible] visit [illegible] had [illegible] satisfactory results, but sorry that [illegible] patience [illegible] in waiting for a complete cure. I am glad you had [illegible] a pleasant visit from Kate [illegible]. I am sorry [illegible] have not [illegible] worked up more enthusiasm in the noble [illegible] of [illegible] letters, especially in the scientific, mathematical [illegible]. — [illegible] two parts of my translation from [illegible] in the Journal [illegible] the other day; the third will probably [illegible] days [illegible] and finish it up. As you may feel [illegible] in the original I send you herewith a poor copy of the two [illegible], which you can perhaps decipher with the help of [illegible] translation but [illegible] not like the changes made in it by the editor and [illegible] have therefore restored [illegible] in almost every case the [illegible]. The translation has the merit at least of being [illegible]. — The [illegible] here has been very backward and [illegible] [illegible] chilly for a week or two past, but we have had [illegible] more than places further south, and had none at [illegible] day when it [illegible] at Washington and all around us. Indeed we have [illegible] very little [illegible] all winter and none at all for a long time [illegible]. According to the calendar the trailing arbutus should be in [illegible] here by this time, and I [illegible] thought of going out [illegible] last Sunday to look for some, but it was so cold that I concluded to stay at home. Richmond was captured on the second of April, 1865, and on that day I found trailing arbutus in bloom [illegible] on the [illegible]; and the first of May is rather late for it to be still in bloom here. But I fancy you hardly [illegible] of [illegible] at [illegible] at any date. — Mr. and Mrs. [illegible] went to Washington last Monday to attend the meeting of the National Academy of Science (the [illegible] and Washington Scientific Association). They were met at the railroad station in Washington by a messenger who read off the names of the arriving members with the [illegible] to which they were assigned as guests. The ladies were [illegible] [illegible] [illegible]

are pleasantly situated [illegible] with a comfortable room and a
[illegible] fire all ready for them. Prof. Frazer has lately resigned
his [illegible]ship in the [illegible], and as usual in such cases was made
an honorary member [illegible] all the privileges and none of the duties
of the active members. [illegible] The meeting of the [illegible]
[illegible] in that [illegible]. Dr. Leidy and Dr. LeConte both went to
[illegible] meeting. Dr. LeConte is talked of for Superintendent of the
Mint [illegible], and would [illegible] to get the place, and very likely will.
His wife was [illegible] the [illegible] last Sunday, as
[illegible] a year ago. Mr. Lesley went to his brother's at Newcastle,
Delaware, last Saturday to relieve them this morning and took his
sister and Mary with him. His wife and Meggie went over
to his sister's, and [illegible] there now. They all left
the house in [illegible] [illegible] [illegible] on Saturday, having hastily
removed the [illegible] [illegible] they had there the day before.
They found themselves unable to stand their host and hostess
[illegible] any longer, and [illegible] out a little sooner than they
had expected to. Mr. and Mrs. Lesley will be here again tomorrow.
— Mr. Delano was here yesterday afternoon for a few hours, and
[illegible] and Phil went up to [illegible] the [illegible] for
[illegible] they were [illegible] at the [illegible]. He seemed in good
spirits, but I had but a moment to talk with him on anything but
business, he was so [illegible] with that throughout his
(for [illegible] [illegible] [illegible] [illegible] a [illegible] [illegible])
visit. He is [illegible] [illegible] manufacturing establishments in [illegible]
Philadelphia, a car building, iron founding, machinist establishment,
that has been getting in rather a bad way apparently through the
inefficiency of the [illegible], a Philadelphian; and Mr. Delano and
[illegible] [illegible] holders are trying to straighten things up again. The son
of this [illegible] is secretary of the Company; and Mr. Delano
[illegible] [illegible] make secretary if [illegible] can get the father and
son out of their places, and they have promised to resign. Yesterday
[illegible] a [illegible] meeting over there, and I was
waiting outside at his [illegible] request, as he hoped to get things
fixed [illegible]. After a time, however, he came to me and said
that he would not be able to get me made secretary for the time
being, but that he had got me elected [illegible] already having put five
[illegible] shares of stock against my name for the purpose. So I was brought into
the [illegible] meeting right away and a directors' meeting followed
it [illegible], and I found myself engaged in business before I
knew it. As I was [illegible] green in such matters I could not help

[illegible] with [illegible] the pointed manner in which [illegible] [illegible] were thrown [illegible] with which they were considered [illegible] the good humored [illegible] of the different members towards each other in spite of a [illegible] in some cases. Mr. [illegible] [illegible] this [illegible] the meeting [illegible] week, [illegible] [illegible] here a fortnight before [illegible] before us. The idea is to give me a small salary to begin with and raise it afterwards [illegible] [illegible] a one as [illegible] [illegible] is so much [illegible] [illegible] personal attention [illegible], as I understand, [illegible] four months [illegible]. There are some very promising [illegible] about the plan and I think I shall take it. But [illegible] drawbacks which are not perhaps very [illegible] mainly. The [illegible] to begin with, [illegible] enough [illegible] live pretty comfortably and is [illegible] [illegible] that the work is not [illegible] the same [illegible] the work I have had hitherto, more [illegible] more or less with [illegible] [illegible] I have no familiarity at all. Still I think [illegible] a little training in this line of [illegible], even if I [illegible] and [illegible] it will be [illegible] within [illegible] weeks, it is likely, [illegible] I shall [illegible] that [illegible] the experiment for that length of time, but [illegible] a little knowledge of business [illegible] [illegible]. It is still doubtful, however, whether the works will be put in [illegible] active business or be closed up [illegible] It will be agreeable to have a fixed salary and [illegible] instead of [illegible] out of the [illegible] in the country. A small salary [illegible] would suit me much better than a large business in such a place as Pottsville, for example, or a larger salary at [illegible] [illegible] of the fact that the [illegible] had to [illegible] something [illegible] professorship would. This [illegible] business has been very successful [illegible]; and in any case [illegible] would be of great service in any future intention [illegible] regions or [illegible].

[illegible] club [illegible]. [illegible] thinking [illegible] [illegible] interest in it and pretty much "petered out" at the same time [illegible] [illegible] very much [illegible]

10

135 [illegible] Street, Philadelphia, [illegible] 1869.

[illegible] Esq.,
Sydney, C.B.

My dear Sir:

Not having heard anything from you since [illegible] months ago, I suppose that [illegible] the [illegible] you had [illegible] to suppose believe. Still, I have thought it possible that my letter to you miscarried, and it has [illegible] to write you this line again to say that the terms of [illegible] would be satisfactory to me, and [illegible] the [illegible] closed and the affair settled up [illegible] convenient.

I suppose [illegible] of the [illegible] not [illegible] the [illegible] of the [illegible] for [illegible] feeling [illegible] [illegible] Breton. Here the spring is backward [illegible] [illegible] in [illegible] [illegible] chilly weather the [illegible] to be setting in abruptly, and wild [illegible] time be in [illegible] in the country around the city. Lady [illegible] garden, of [illegible] your shape, size and gait, walking [illegible] square in front of my window, [illegible] you, and [illegible] to spend the coming weeks of spring and early summer weather here instead of in Sydney.

Hoping that you are all well, and that you will give my best regards to all your family, I remain, very affectionately yours, [illegible]

17

[illegible]

[illegible]

[illegible]

[illegible] your letter [illegible]
[illegible]
[illegible]
[illegible]

Very truly yours
[illegible]

[illegible]

[illegible] ... [illegible] gratifying [illegible]. [illegible]

[illegible] ... [illegible]

[illegible] ... much more of [illegible]

[illegible] ... [illegible]

[illegible] ... [illegible]

[illegible] ... that the work will be [illegible]

[illegible] ... will get [illegible] ... days.

[illegible] ... [illegible]

[illegible] ... [illegible]

[illegible] yours.

[illegible] [illegible] Lyman.

[illegible] Street, Philadelphia, [illegible] April [illegible]

[illegible] Lesley Esq.

No. 55 Broadway,

New York.

My dear Sir;

My Alabama Correspondent has written me that he would be glad to have me go and look at his land as soon as I like, and that he had not written to me on account of sickness for some time. As our meeting of next Wednesday was so near I thought it would be best to wait here for that at any rate, and have written him accordingly. This survey is in itself of little importance but would be worth my while if it should not interfere with something better.

Yesterday and today I have been over at the Coal works with Mr. Hunt, whom Mr. [illegible] sent over to take the Inventory. Mr. Hunt is a very good hand at such work, and it is very well that he was sent on for it. It will probably be done before Saturday night, although there has been much more to do than when the Inventory was last taken.

Very truly yours,

Benj. Smith Lyman.

135 South Fifth Street, Philadelphia, [illegible]

J. P. [illegible] Esq.,

Architectural Iron Works New York.

My dear Sir:

The inventory was successfully finished yesterday, and Mr. Hunt went home to New York in the aftern[oon]. He said that [illegible] to copy it off so as to have it in condition to hand it to you on Tuesday; as I thought you [would] particularly desire it before coming on here Wednesday. It [is] the very thorough as regards the materials, tools and stock [of] machines in and [illegible]; but the unfinished or half finished building with its masonry and lumber was not [illegible], as Mr. Hunt thought it would keep him over until Monday, thereby causing great inconvenience; and I thought I could m[ake] it satisfactorily any [illegible] necessary, afterwards. It is differ[ent] from the other things taken in being for the most part fixed and [not] being subject to wear and tear from use.

Very respectfully yours.

Benj: Smith Lyman.

[illegible] Philadelphia, [illegible]

[illegible]

[illegible]

Boston.

Dear Sir:

[illegible] of this month, [illegible] I am [illegible] the [illegible] of [illegible] have been delivered already.

[illegible]

[illegible]

[illegible] Philadelphia, 25 April [illegible]

R. W. Raymond Esq.

Editor [illegible] Mining [illegible].

My dear Sir:

Four of the copies of the Journal have just come to hand again today by mistake; and as I do not wish for extra copies and charge, please stop the [illegible] to them. If you wish for these copies to fill up your sets, I will either send them back to you or put them in the hands of your agent here.

I am obliged to you for making so few unintentional changes in the manuscript of the two last parts of that translation; but two of the misprints were a little rough: "foolish" for "[illegible]", and "[illegible] in the pleasure halls" instead of "towers. [illegible] is his pleasure hall"; both of them in the songs.

Another misprint that I have noticed is in the list of [illegible] and [illegible] the "[illegible]" [illegible]. [illegible] have [illegible] "[illegible] Book" instead of "[illegible]"; it is misprinted in the "[illegible]" from which you [illegible] the names. [illegible] in any [illegible].

Very truly yours,

Benj. Smith Lyman.

5 South Fifth Street, Philadelphia, 26 April 58.

[illegible] Esq.

Architectural Iron Works,
New York.

My dear Sir:

Your favor of day before yesterday is at hand, and as you [illegible] I [illegible] called on Mr. Lesley, and learn from him that he [illegible] you the [illegible] of the document you wished for by the mail of last [illegible] evening. It probably came to hand after you wrote. If it should have miscarried it will be almost too late after this reaches you to send you another copy before you [illegible] [illegible]. [illegible] you will let me know, I can [illegible] for you [illegible] arrival here.

I wrote you yesterday of the satisfactory [illegible] [illegible], and hope that Mr. Hunt will have a finished copy [illegible] ready for you before Wednesday. I see certainly should [illegible] [illegible] of the value of the unfinished building got at either by a careful measurement of its parts or otherwise; but perhaps you have such an estimate already. I cannot conveniently make the needful measurements today nor tomorrow, and perhaps there is less reason for haste about it than about the rest, at any rate for a few days. The stone walls of the building ought to be sheltered from the rains by a few boards [illegible] the top at a trifling expense; and that ought to be attended to forthwith, but Mr. [illegible], who spoke of it, said he had no funds for the purpose.

Very truly yours.
Benj. Smith Lyman

18

[illegible] Philadelphia [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] R. H. [illegible]

[illegible] Virginia [illegible]
[illegible]

[illegible]

Your [illegible] favor of the [illegible]
[illegible]
[illegible]

I [illegible]
[illegible] and [illegible]
[illegible] Mr. R. C. [illegible]
[illegible]
[illegible] recommend you [illegible]
[illegible]
[illegible] of the [illegible]
[illegible]
[illegible] to make the examination and report [illegible]
[illegible] would be a hundred and [illegible]
[illegible] one half to be paid before my leaving home and [illegible]
[illegible] on my arrival [illegible]
[illegible] of the report, I send you a copy [illegible]
printed [illegible]
[illegible]
[illegible]
[illegible] perhaps [illegible]
[illegible] Very respectfully, [illegible]

35[illegible] North [illegible] Street, Philadelphia, [illegible]

Dear Mother:

Your favor of the twenty second came duly to hand. I am glad that Father's eyes keep on growing better, and hope the Chronicle will do no harm. — There is no need for your feeling either alarmed or pained at seeing "a poet in the family," if you mean me. It is one thing to write poetry and another to translate it into ~~verse~~ poetry; although McPherson, who translated (or as most believe wrote) the Poems of Ossian, says in his preface to them that "a translator who cannot equal his original is incapable of expressing its beauties." He says too that "the making of poetry is like any other handicraft may be learned by industry," and the same was the opinion too of Horace, the Latin poet. As far as making verses is concerned I have no doubt it is perfectly true; and perhaps [illegible] a man is wholly destitute of every spark of poetry. At any rate the practice of making verses is an extremely good one for learning the use of ~~words~~ words. Mr. Ellis used to make me do something like that, and [illegible] would not have taught me how to [illegible] [illegible]. [illegible] in College I practised a little at writing Latin verses, and three years and more ago I tried my hand a little at making [illegible] verses in translating from the German, but have not done much of the kind since then. — Educated miners do take a great deal of pride in their business, and in Germany even [illegible] ones do; perhaps it is not so much so in this country yet. As for hard work the German miners have to work pretty well for low [illegible] [illegible] miners are handsomely paid and do not work so very hard; in fact, they are paid so well that they feel able to be idle a good part of the time, having no very expensive tastes, as whisky is cheap. They always work under cover and even in winter work in a comfortably warm place, in summer, cool. As for the danger it comes in great part from the carelessness of the miners about blasting and the like, or carelessness of the owners [illegible] to ventilation and such matters. The fire in the Nevada [illegible] [illegible] you speak did not come from "fire damp," for that is found in coal mines and not in silver mines; and perhaps [illegible] from "black damp" i.e. gas such as gives the bad smell to [illegible] eggs, which is also explosive and might be found in silver mines as well as in coal mines; but it came more likely from

[illegible] carelessness about gunpowder or nitroglycerine or fire about [illegible] candles. These mines there are chock full of wood put in to prop up the rock and prevent the two walls of the vein from closing together, and it is the burning of this great quantity of wood that has made the fire last so long and so much mischief. In coal mines the coal sometimes takes fire, but of course there is not that trouble in a silver mine. — I was interested in noticing in the paper that one of [illegible] Sam's sons had got a place at the Naval School; but is not the prospect of advancement in the Navy rather slim again, as it used to be in old times, sometimes when men grew gray as lieutenants? — I had a letter a few days ago from Edward Hunt saying that he had two weeks before been appointed Superintendent of the Rolling Mill at Pomeroy. His salary was not fixed yet, as the Company did not feel flush and Mr. [illegible] thought he could make better terms in a month or two than he could then. So Edward seems to be fixed, and the next thing to hear of will be his marriage [illegible] [illegible] if [illegible] has a little property producing [illegible] so that they can get along very well in a country place even if his salary be but [illegible] at the outset. He finds rolling mill [illegible] a rather troublesome set to manage, but thinks he shall get along in spite of their seeming disposed to try him, and Mr. [illegible] who acted as Superintendent before [illegible] still there thinks he will succeed very well; and he ought to know by this time, after seeing Edward daily for three months. — [illegible] same correspondent wrote the other day that he was satisfied with my terms and wished me on as soon as I liked, and had not written sooner on account of absence from home. I have thought it worth while to wait until Mr. [illegible] [illegible] day after tomorrow, and shall very soon after that [illegible] for the South unless induced to stay here by something better. Very likely I can go back without interfering with anything here. If I do go back there is some prospect of more work in the same direction, which may be looked on as a set off to the prospect well [illegible] of higher salary at West Philadelphia if I should hang on there a while. Your warning in regard to such "prospects" was well put. Two or three other mines projects are talked of, but do not look very promising. Three or four of the last days of last week I was occupied in [illegible] with the taking of an inventory at the West Philadelphia place.

Give my love to all. Your affectionate Son Benjamin Smith Lyman

135 South Eighth Street, Philadelphia, 27th April 18[illegible]

[illegible] Fanny:

Your most interesting and welcome favor of the [illegible] did not come to hand until Saturday. I had been looking for it [illegible] and some days before delivered your message [illegible] [illegible] [illegible] she delivered a [illegible] message [illegible] [illegible] [illegible] had been answered. It is consoling however to think that neither [illegible] in [illegible] your letter nor in delivering that message was owing to the never failing forgetfulness of my own miserable sex in such matters. [illegible] of [illegible] going to Springfield to bid good bye to her sister [illegible] Where is Kate [illegible] them? To Europe, with all the rest? — I am glad you are finding such profit and pleasure in your French [illegible] I should think you must be right about the advantage of [illegible] [illegible] last few weeks she was here [illegible] [illegible] every morning and [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] you have, but with less profit. She is going to [illegible] [illegible] [illegible] [illegible], she is encouraged to [illegible] [illegible] ever since she could [illegible] the pencil. [illegible] [illegible] is encouraged to make the [illegible] [illegible] [illegible] [illegible] on the piano, and [illegible] [illegible] [illegible]. — What you say of your experience with [illegible] [illegible] seems to confirm my views about it. Mr. [illegible] was saying [illegible] [illegible] [illegible] playing with planchette [illegible] [illegible] [illegible] one evening. After watching the writing a good [illegible] [illegible] remarkable thing about it, and [illegible] that the pencil in all its irregular movements was [illegible] [illegible] [illegible] [illegible] after that, it did run off the paper. — Mr. [illegible]'s book [illegible] very interesting indeed, although not perfectly satisfactory in all points (as what is?). The Artistic part [illegible] [illegible] [illegible] but I do not believe that anybody not already acquainted with the subject would [illegible] much [illegible] from it at the first reading; perhaps on reading it over a second time a clearer idea and a more [illegible] one would be got. But who can read a [illegible] [illegible] time in these days? It is too much for an[y] writer [illegible] and [illegible] so unknown a subject as Art in [illegible] [illegible] [illegible] [illegible] and simple a way as to give a clear idea at the first reading, if not a full knowledge of the whole matter.

- the Northern Lights you speak of were the subject of quite a powerful ... at the last meeting of the American Philosophical Society. I gathered from ... there that it was well understood now that such lights were caused by ... rarified vapor in the air, vapor even thinner than ordinary ... also. These lights I saw very well at the best time a little while ago. I was going up Ridge Road and crossing Broad Street on my way to see Mrs. Palmer, the first time since her short visit to the ... She seemed to be very well and was very sorry that she ... you at her sister's in New York, or at her son's in Brooklyn. ... as usual in the dining room, up stairs, and the ... was there too. He had quite lately begun to improve a good deal, and to understand very well what was said, and tried to talk to ... was a gentleman there whom he wished to talk with ... mother. ... left arm is obedient to his will and ... hands and plays with his boys with his left hand. His ... beyond understanding, but some words are clear enough ... they go and ... would shake his head; and he ... His right arm indeed seems to be the part mainly affected. ... seems to be ... the ... of the ... ; and I found ... sometimes ... by officers. Mr. Frazer ... ... was very suddenly he says. — Mr. Frazer ... assistant, the same that was my assistant over three years ago, ... daily expected home from ... if he has not already arrived. Last Sunday evening his mother was said to be already quite ... about him as his allowance ... was fifteen days out ... It was a Cunarder and there was no great cause for alarm ... day before last Aunt Susan took tea with the Frazers and that ... the cause of my seeing Mrs. and ... Frazer for a moment ... one day party in the library broke up. I had never seen them ... before, and that was in the dusk one summer evening ... ago when our cousins ... met in the garden ... was to go with Mr. Lesley on a trip to the mountains of ... as soon as he arrived; but Mr. Lesley has just been here this ... saying to see if I would go in his own place as he has other ... for himself. If I should go, and it will be decided in a day or two, ... will take me about a month in the mountains to do the work he says; and that will be better than the Alabama ... Alabama, however, there was a prospect of other work besides what ... only take me down there. This Pennsylvania work would also be ...

[illegible] work, and this is a [illegible] region for [illegible]
[illegible] field, [illegible] just been in here [illegible]
[illegible] Plan [illegible] geology [illegible]
[illegible] and [illegible]
Dr. Evans and his fellow [illegible] in the [illegible]
tomorrow, and something will be decided about that matter. [illegible]
see there's just a number of projects on foot [illegible]
from me next in Philadelphia, in [illegible]
or in Alabama or somewhere else is quite [illegible]
if you should not see until you write yourself [illegible]
— Mr. Lesley has at some just agreed to undertake [illegible]
United States [illegible] and Mining Register [illegible]
published just [illegible] in Walnut Street, [illegible]
will begin in a week [illegible] earlier. It is a [illegible]
is the best [illegible] here, [illegible]
[illegible], and chiefly [illegible] coal [illegible]
Lesley it will no doubt take a high place in the [illegible]
[illegible] world. There will be [illegible]
it [illegible] and it may [illegible]
[illegible] ^not ~~[illegible]~~ this very well
for the [illegible] and coal matters, the [illegible]
mining [illegible] as [illegible]
I had quite forgotten that [illegible]. The
Springfield Republican might have mentioned some [illegible]
his romantic life, if [illegible] about them. He [illegible]
leaving the University [illegible] of twenty ~~[illegible]~~
[illegible]
[illegible] only thirteen years [illegible]
came engaged very soon. She afterwards [illegible]
within ~~four~~ ^two days after becoming fifteen years old. [illegible]
[illegible], but a few months later [illegible] to Freiberg [illegible]
engaged to Julie von Charpentier, daughter of the [illegible]
[illegible] months after the loss of Sophie. In August [illegible]
[illegible] the wedding at [illegible]
was put off, and he finally died the next [illegible]
his published writings which make in all [illegible]
not [illegible] after his [illegible]
[illegible]

[illegible] by [illegible]

[illegible] *intelligence* [illegible]

[illegible] The [illegible]

[illegible] without [illegible]

[illegible]

[illegible] very [illegible] He [illegible]

[illegible] his friendly [illegible]

[illegible] it is not [illegible]

[illegible] of high [illegible] in the [illegible]

[illegible] close, notwithstanding [illegible]

[illegible] good. The feelings [illegible]

[illegible] very [illegible]

[illegible] imagine; [illegible]

[illegible] live [illegible]

[illegible] a [illegible] of Novalis in [illegible]

[illegible] their way [illegible] into [illegible]

[illegible] adventures, and soon after [illegible]

[illegible] house [illegible]

[illegible] received by all [illegible]

[illegible]

[illegible] grandfather; and [illegible]

[illegible]

[illegible]

[illegible] and come [illegible]

This is [illegible] the end of the first part of the story and [illegible] of the [illegible] of Novalis [illegible]

[illegible] through the whole. [illegible]

[illegible]

[illegible] the March Number of the [illegible]

a few days [illegible] and left Uncle [illegible] and [illegible]

[illegible] reading. [illegible]

[illegible] I may [illegible] the number [illegible] to fill up the [illegible] before

[illegible] The April Number has been [illegible]

[illegible] to read it through, and [illegible]

send it to you [illegible]. Don't feel obliged to wait a whole month before writing;

letters received [illegible], and the smallest favors thankfully received.

Believe me, as ever,

Very affectionately yours.

Benj. [illegible]

135 [illegible] Philadelphia, [illegible]

A. Edmonds Esq.

Montgomery, Ala.

Dear Sir:

I am sorry to disappoint you after all, but I find that I cannot make your survey just now. Nevertheless, I shall perhaps in a month or so be free again, so as to be able to do it, if you should still desire it.

Hoping that the disappointment will prove to be of no serious importance, I remain

Very respectfully yours,

Benj. Smith Lyman.

[illegible]

[illegible] Esq.

55 Broadway, New York.

[illegible]:

[illegible] from [illegible] enclosing a free pass over [illegible], Rome & [illegible] railroad has come to hand. [illegible] [illegible] being able to use it a [illegible].

My address for the present will be [illegible] Jefferson County, Pennsylvania. [illegible] is a small village and there is no [illegible] address. [illegible] miles [illegible] [illegible] [illegible] [illegible] letter [illegible] from New York. Besides [illegible] I shall be [illegible] from the village [illegible] time [illegible] and that will add to the delay in getting letters.

[illegible] [illegible] [illegible] [illegible] about [illegible] [illegible] [illegible] if they [illegible] not willing to agree to your [illegible]. They seem [illegible] all [illegible] [illegible] to have [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] for them. [illegible] it would be a great advantage. [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] yours. [illegible] Smith [illegible]

[illegible]

Altoona, Pa.; 30 April, 1869.

Prof. J. P. Lesley.
Phil.da

My dear Sir:

Will you be so kind as to find these three books on the [illegible] in my office and hand them to Mr. Whitman; [illegible] "Noualhier [illegible]"; Taylor's "Report on Weights and Measures" and Agathonius [illegible] System". They are lying together in [illegible]. They are Philadelphia Library books that Mr. [illegible] lent me, and I took them to his Office this morning [illegible] shut up. I meant to have tried again to find [illegible] it at the last minute. That book "Engineering [illegible]" might be returned along with the others [illegible] he will not doubt be glad to have you keep it [illegible] if you wish [illegible]; he does not know yet that you have it, so please [illegible].

[illegible] started at about 11:50 city time, but we [illegible] it, and after a comfortable supper are spending the night comfortably here.

I [illegible] purchases at Queen's, so that my exchequer is rather depleted and I fear that I shall [illegible] to draw on you sooner than you expected; unless Mr. Jenks [illegible] me through handsomely.

Very affectionately yours,
Benj: Smith Lyman.

[illegible], Pa., 30th April, 1859.

Prof. J. P. Lesley

[illegible]

My dear Sir:

Will you be so kind as to [illegible] these three books on the [illegible] in my [illegible] and hand them to Mr. [illegible]: [illegible] "Taylor's Report on [illegible]" and [illegible] They are lying together [illegible] They are [illegible] Philadelphia Library books that [illegible] and [illegible] this morning [illegible] I meant to have tried again to find [illegible] that book "Engineering" [illegible] might be returned along with the [illegible] should be glad to have your [illegible] known [illegible] you have it, [illegible]

[illegible] started at about 11:30 only time but [illegible] and [illegible] a comfortable [illegible] comfortably here.

I [illegible] purchases at [illegible], so that my [illegible] and [illegible] that I [illegible] you [illegible] expected; unless [illegible] through [illegible].

Very affectionately yours,

Benj. Smith Lyman.

Altoona, Pa.; 30 April, 1887.

Wm. E. Whitman Esq.

133 North Fifth Street, Philada.

My dear Sir:

I have written to Mr. Lesley to get the Library books [illegible] borrowed from you and return them to you. I [illegible] [illegible] office this morning, but found it locked up; [illegible] [illegible] [illegible] tried it again, but forgot it in the [illegible] of the last minute. I took the book "Engineering [illegible] [illegible] [illegible] to Mr. Lesley for him to read something in [illegible] [illegible] [illegible] return it along with the rest if you like.

I was sorry to be so hurried for the last day or two that I could not have another quiet chat with you; but I came away by the noon train, so as not to have to travel all night, and shall consequently sleep here comfortably.

Hoping to see you again before many weeks in Philadelphia [illegible] you [illegible] [illegible] [illegible], and that your health will [illegible] very best in the mean time; and thanking you very [illegible] [illegible] the loan of the books, [illegible]

Very truly yours.

Benj. Smith Lyman.

Address: Punxsutawney, Jefferson County, Penna.

Altoona, Pa., 30 April 1869.

Geo. E. [illegible] Esq.

133 South Fifth Street, Philada.

Dear Sir:

I have written to the [illegible] to get the [illegible] and return them to you. I [illegible] office this morning, but found it locked up; [illegible] I think it [illegible] but forgot it in the [illegible] "Civil Engineering" [illegible]

I have arranged to be on hand for the [illegible] day when [illegible] to visit with you; but having [illegible] by the [illegible] train, do not [illegible] all night, and shall [illegible]

Hoping to see you again before many weeks in Philadelphia, [illegible] and that your health [illegible] in the same time, and thanking you [illegible]

Very truly yours,
Benj. Smith Lyman.

Address Punxsutawney, Jefferson County, Penna.

Punxsutawney, Jefferson County, Penn.
2 May. 1869.

Miss C. D. Lyman
226 South Broad Street, Philada.

My dear Miss Lyman:

I send you herewith the receipt for your City and State taxes, which I could not make it convenient to hand to you in person before leaving town. You will see that they are a trifle higher than last year, owing to the fact that the rate of the City tax is $1.50 instead of $1.40. I did nothing about the United States taxes, from lack of time, but can attend to them when I get back to the city, whether you should be there then or not. I shall in all likelihood be at home again long before you leave town; but shall certainly be there before the taxes become payable; so that will be all right.

I left Philadelphia Friday noon, as expected when I saw you; slept that night at Altoona; reached Indiana, the end of the railroad, yesterday noon; and found there Mr. Jenks of this place, to whom I had a letter. He had just come from Pittsburg where he had gone to meet his niece, Miss Sallie Somebody, a tall beauty, and she was with him. She had just come on from her home in the Southern part of Illinois to make a visit here. Her home either is or was only eight miles south of Havana where Tom Jones lives. She is young, lively and bright enough, though without the advantages of a collegiate education, and made a sufficiently agreeable travelling companion. After dining at Indiana we set out in Mr. Jenks's carriage, in the rain, over muddy roads for this place, twenty seven miles to the north. With me had come from the city a young man named Foster, nephew of one of the gentlemen interested in the City survey, and just fresh from three years and a half at Freiberg. He goes merely or mainly to see a little of practical field work. We four filled the carriage and the buggy that had brought it from here had to be left behind to come in some other way. I was placed in the back seat with Miss Sallie, and our some small pieces of luggage were stowed away wherever room could be found.

Punxsutawney, Jefferson County, Penn.a
2 May, 1859.

Mr. C. D. [illegible],
226 South Second Street, Philad.a

My dear Mr. [illegible]:

I send you herewith the receipt for your City and State taxes, which I could not make it convenient to hand to you in person before leaving town. You will see that they are a trifle higher than last year, owing to the fact that the rate of the City tax is $1.50 instead of $1.40. I did nothing about the [illegible] for lack of time, but [illegible] of time then. I [illegible] back to the City, whether you should be there or not. I think in all likelihood [illegible] before you leave town; but shall certainly be there before the taxes become payable; so that will be all right.

Left Philadelphia Friday noon, as I expected when I saw you; slept that night at Altoona; reached [illegible] the next morning, and found there [illegible], to whom I had a letter. He had just come from Pittsburg [illegible] his [illegible] [illegible] and [illegible] had just come on from his home in the [illegible] part of [illegible] to make a visit here. [illegible] [illegible] some sixty miles [illegible] [illegible]. [illegible], [illegible] and [illegible], [illegible] with the [illegible] of a [illegible] education, and made a [illegible] [illegible] travelling companion. After [illegible] [illegible] in [illegible] [illegible] in the [illegible], [illegible] [illegible] [illegible] the [illegible] [illegible] from the [illegible] a [illegible] [illegible] [illegible] [illegible] [illegible] in the [illegible], and [illegible] [illegible] [illegible] and [illegible] [illegible]. The [illegible] [illegible] to [illegible] a little of [illegible] [illegible]. We [illegible] [illegible] the [illegible] and the [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. [illegible] [illegible] the [illegible] [illegible] [illegible], and [illegible] [illegible] [illegible] of [illegible] [illegible] [illegible] [illegible] [illegible].

we have ... ninety six hours and a half, and we did not get here until about half past eight, some time after dark. On the way we found that Mr. Jenks was a lawyer and had five students studying with him. The country we passed through was settled with farms most of the way, but a little back from the road the great forests could be seen that cover most of this part of the state. North of this the country is still without any farms, and in that wild region our work is to be. Indeed Mr. Jenks is to day in a quandary as to how we shall find any lodging place or food during part of the journey. It is rather cold and just now rather damp to sleep out on the ground. On our way there were many jokes between the [illegible] and Miss Dolly about the relative merits of this region and Illinois, in which she held her own pretty well for and telling her I [illegible], and [illegible] her [illegible] as a visit.
On arriving here we found the family expecting us, or at least a part of us. Mr. Lesley had been expected instead of me, and Mr. Foster not at all. Mrs. Jenks seems to be a very nice woman of perhaps forty, and comely, and the mother of three or four children; one a son of seventeen or eighteen, and two little girls for whom a couple of handsome hats were brought from Pittsburg and were cared for yesterday by Miss Dolly and myself. There is a ~~[illegible]~~ grandmother in the family too who seems to hold a rather subordinate position, and I conjecture her to be the mother of Mrs. Jenks. Besides these there is a Miss Helen Something else whose relationship, if any, to the rest I have not yet made out. She is perhaps the handsomest of all, but one of her eyes suffers from either a temporary or permanent eclipse. She seems to be the best educated of the ladies too, the young ones at least, and altogether quite interesting, and quite plausible but very ... spoken. She played ... to us ... [illegible] ... quite obligingly but more ... See you not afraid for me! I ... [illegible] ... and [illegible] me

Ever affectionately yours. Benj. Smith Lyman.

My headquarters and address for the present will be ... [illegible] ... It was an Indian town ... with ... [illegible]

[illegible]

[illegible]

[illegible]

[illegible] [illegible]

[illegible] think you the [illegible]

[illegible]

[illegible] that there is [illegible]
[illegible] the [illegible] have [illegible]
[illegible]
[illegible] gentlemen interested in the company
[illegible]
[illegible] and give the matter [illegible]
[illegible] but is too much [illegible]
[illegible] time after that. [illegible]
[illegible] afield [illegible] afterwards
[illegible] the company. [illegible]
[illegible] the importance which [illegible]
[illegible]
[illegible]
[illegible] and it [illegible]
[illegible] instead [illegible]
[illegible]
[illegible] account. [illegible]
[illegible] be [illegible]
[illegible] the [illegible] In the [illegible]
[illegible] of [illegible] and
[illegible] of our [illegible]
[illegible] been made for the time [illegible] of the
[illegible]
Director [illegible]
his [illegible] has [illegible] of the affairs, it would seem.
[illegible]
[illegible]
[illegible] and [illegible]
[illegible] be in this [illegible]
[illegible]
[illegible]
[illegible] will be [illegible]
[illegible]
[illegible]
[illegible]
[illegible] Benj. Smith [illegible]
well and [illegible] Very truly yours. Benj. Smith [illegible]

Punxsutawney, Jefferson County, Pa.,
2 May, 1869.

W. G. Atkinson Esq.
Newburgh, N. York.

Dear Sir:

Your favor of the twenty-ninth is at hand, and I answer it at the first possible opportunity. Your favor of the fourteenth also came to hand. I am somewhat at a loss how to make out as you propose definite terms of agreement between us, from my [illegible] understanding what are precisely your views in the matter. I am, too, just at the moment so very much occupied with field work that I can hardly give the affair the proper consideration; and, as you seem to have considered it fully already and to have a clear idea of what you wish, can [illegible] perhaps, [illegible] terms of agreement yourself [illegible] [illegible] If it should not prove [illegible] I could [illegible] [illegible]

On the other page I send you a few references in return for the list you sent me.

Yours truly
Benj. Smith Lyman.

My address will be here for two or three weeks at least; but letters sent to [illegible] 708 [illegible] St., Philada., will at any time be forwarded to me.—B.S.L.

References:

1 Prof. J. [illegible], [illegible] North Fifth Street, Philadelphia.
2 Mr. Henry [illegible], [illegible] ave., cor. [illegible] "
3 " James T. Freeman, Chestnut St. above 6th "
4 " [illegible] C. [illegible], Esq., Sixth St. above Spring Garden "

5 " [illegible], No. 53 Broadway, New York & Newburgh, N.Y.
6 " [illegible], [illegible] Gas Light Co., Elizabeth St., New York
7 Messrs. Robert [illegible] & Co., [illegible] St., New York.
8 Mr. [illegible] (of the firm [illegible]) 35 Burling Slip, N. York.

9 Dr. [illegible], No. [illegible] Street, Boston
10 Mr. J. [illegible] " " " " "
11 " [illegible] " " " " "
12 " Emery " " " " "

13 " [illegible] (of Springfield Republican) Springfield, Mass.
14 " [illegible] B. Coxe, [illegible], Jeddo Post Office, Luzerne County, Penn.
15 Prof. James Hall, Albany, New York.

Punxsutawney, Jefferson County, Penn.;
2 May, 1869.

Warren Delano Esq.
[illegible] Broadway, New York.

My dear Sir:

Just as I was leaving home I got another letter from W. G. Atkinson urging again his proposal of a "Co-operative Land & Mining Agency," as he calls it this time, where I should "have equal footing and equal profits with" himself. I am not altogether taken with the tone of his letters, but he may be all right and it may prove desirable to form some business connection with him. I have, therefore, asked him [illegible] to draw up an agreement for us to sign; as he had asked me to do, but I am too much occupied just now to consider the matter very carefully, and he seems to have a definite idea in regard to it already. This will give me additional time to find out something about him, if possible; and in the meantime I have sent him also a few references in return for the list he sent me, and have taken the liberty of mentioning you among them. If he should naturally make any inquiries of you please let me know what impression he makes upon you.

I arrived here last night, and this will be my headquarters and address for probably two or three weeks at least; and then I shall move a little farther north. The mail comes here from Indiana, the nearest R.R. point, 27 miles off, every Tuesday, Thursday and Saturday. I suppose you will not care to have me be at the next stockholders' meeting of the R. C. & M. Co.; but if you should wish for anything of the kind (say a proxy) you can write me. But you doubtless have no need for that. The roads are just now very bad, and the stage takes a whole day for the trip from here to Indiana.

Very truly yours. Benj Smith Lyman.

Punxsutawney, Jefferson County, Penn a.,
2 Aug 1869.

Warren Delano Esq.
[illegible] Broadway, New York.

My dear Sir:

Just as I was leaving home I got a letter from Mr. J. Atkinson urging again his proposal of a "Cooperative Land Prospecting Agency," as he calls it this time, where I shall "have equal profit and equal risk with himself." I am not [illegible] this taken with the tone of your letter, but he [illegible]

[illegible]

Very truly yours,
Benj. Smith Lyman.

Punxsutawney, Jefferson County, Penn.
2 May, 1869.

Prof. J. P. Lesley,
104 South Fifth Street, Philadelphia.

My dear Sir:

We arrived here safely last evening after nearly six hours and a half of driving over very bad roads. The over coat and shawl were both very serviceable on this part of the way; and the weather is still so cool that we have fires, though I sit now by an open window. The only mishap was my forgetting to check my valise at Kittanning, or rather to reclaim it and get it marked again there; so it will not get here until the stage comes another day. But there is nothing in it that I specially need before that time, I believe. Mr. Jenks and his family prove to be quite agreeable. He seems to be a man of great consequence in these parts, and a prominent lawyer. There are two handsome young ladies in the family; so what more could be desired? One of these came with us from Indiana, just from Illinois, to make a visit here, and Mr. Jenks her uncle had met her at Pittsburg. The weather was rainy nearly all day yesterday and is partly so today, and this afternoon again looks threatening for tomorrow.

I have not yet fully understood whether the work I am undertaking here is to be done in the first instance, for you or for those other gentlemen [illegible]. In either case do you or they wish to be kept posted by letter about the progress of the work, or about its results? The mails run but three times a week between here and Indiana; and come here from Indiana Tuesdays, Thursdays, and Saturdays, taking a whole day for the trip each way, and starting from Indiana early in the morning, before the train comes in by which we came. Mr. Jenks is at some loss to devise some way by which we can get food and lodging while in the wilderness west of this.

I am yours ever

Affectionately yours. Benj. Smith Lyman.

3

[illegible], Jefferson County, Tenn.
2 May 1859.

[illegible] Lesley, Esq., [illegible] South Eighth Street, Philadelphia.

My dear Sir:

[illegible]

[illegible]

Affectionately yours, Benj. Smith Lyman.

1

Punxsutawney, 2 May, 1867.

My dear Sanborn:

I have to thank you for sending me the weekly Republican I asked for and two other [illegible] weekly and daily numbers. They have all been useful and interesting to me. I am also very much obliged to you for the puff that was in one of them.

Perhaps although you have been a schoolmaster in your time you hardly consider the simple date there given a sufficient indication of the part of the world I am in; but I believe there is no other place of the name now all the world over. You must know then that it is a village of [illegible] near the southern edge of Jefferson County, Pennsylvania, twenty seven miles north of Indiana, the nearest Railroad point, and in the edge almost of a vast wilderness to the north [illegible] most of my work about here to be, [illegible] at a large [illegible] of tracts of land, especially at a [illegible] twenty thousand acres within a dozen miles of this place, but more at a [illegible] [illegible] for [illegible] or [illegible] [illegible] more perhaps, [illegible] [illegible] will [illegible], [illegible] weeks, and [illegible] or three weeks. [illegible] my address as well as headquarters will be here: Punxsutawney, Jefferson County, Penn[illegible]. The [illegible] is [illegible] like [illegible] [illegible] Great Town, for it was also [illegible] village infested with [illegible]. I arrived here last evening in company with a young man from Philadelphia, named Foster, just [illegible] [illegible], whose uncle, [illegible] in the [illegible] with [illegible] [illegible] this field work. We were brought here from Indiana [illegible] [illegible] afternoon and evening over very muddy [illegible] roads by Mr. [illegible], not Captain [illegible], but an important [illegible] these parts, and a [illegible] [illegible] of wide practice [illegible] with [illegible] students in his office. He returns at [illegible] Indiana on his way home from [illegible] [illegible] where he had met [illegible] [illegible] Kelly [illegible] [illegible] come from [illegible] [illegible] to make a visit [illegible] [illegible] ago. He and I [illegible] on the [illegible] [illegible] with Mr. [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] — or, you might say, [illegible]

[illegible] been [illegible] in these parts. Mr. Jenks [illegible]
[illegible] is [illegible] staying [illegible] at [illegible]. Mrs. Jenks is
[illegible] woman of [illegible] [illegible], the [illegible] of one or two [illegible]
[illegible] [illegible] [illegible] fifteen years old, and two little girls of the
[illegible] [illegible] also [illegible] family [illegible] [illegible] she
[illegible] [illegible] [illegible] here, [illegible] [illegible] never [illegible]
[illegible] here. There is also a Miss Helen [illegible] in the family,
[illegible] young woman who dresses [illegible] [illegible]
[illegible] [illegible] like Miss Sally. Whether Miss Helen is
[illegible] or [illegible] does not yet appear, nor whether she is any
[illegible] more than visiting here. She is well spoken, and would
[illegible] be [illegible] educated a good deal than Miss Sally, and she
[illegible] [illegible] pieces [illegible] for our amusement last
[illegible] most obligingly [illegible] modestly. There is something
[illegible] about me [illegible] [illegible] but I have not yet been able to
make out [illegible] [illegible] [illegible] [illegible] or merely [illegible] for
[illegible] [illegible].

[illegible] [illegible] [illegible] come here himself to attend to the
[illegible], but [illegible] [illegible] inconvenient to do so, because he
[illegible] [illegible] [illegible] the Editor of the United States [illegible]
[illegible] Mining Register a weekly paper of Philadelphia.
[illegible] [illegible], he does not wish to be made public. His
[illegible] [illegible] paper will begin next week I believe. The proprietors
[illegible] [illegible] [illegible] [illegible] but [illegible] [illegible] Coal ~~[illegible]~~
[illegible] [illegible] [illegible] otherwise very [illegible]. It is possible
[illegible] [illegible] in Mr. Seeley's absence I may have a finger in
the pie [illegible] [illegible] typographically. — [illegible] Frenchman who
[illegible] [illegible] [illegible] [illegible] [illegible] a small [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] writer, but I have seen nothing of him
[illegible] [illegible] [illegible].

I feel really very much obliged to you for the numerous
[illegible] [illegible] [illegible] so kind as to publish for me, and would
be [illegible] glad to [illegible] some return for it, if possible. If you are
not [illegible] with matter for your paper but that you would like
a [illegible] [illegible] from me at odd times now and then, a letter or
[illegible] or something else, I should be happy to furnish it free
of [illegible] [illegible] [illegible] compensation. As it would [illegible] [illegible] you can
[illegible] [illegible] [illegible] [illegible] danger of displeasing me. Indeed in
[illegible] [illegible], if any could be written, it would often be especially undesirable to have
[illegible] [illegible] [illegible] thoroughly [illegible] because it is [illegible] (as [illegible]) [illegible] to have [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] business [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

The [illegible] in [illegible] Oil Well.

[illegible] Oil Well is on land [illegible] in [illegible] Jefferson County [illegible] [illegible] [illegible] [illegible].

[illegible] The [illegible] for [illegible].

Boring. The boring was done by [illegible] Jefferson County, [illegible] and who had had experience [illegible] boring several wells in the oil regions and [illegible] wells [illegible] no special [illegible].

[illegible] Mr. Thompson said [illegible]: [illegible] no [illegible] [illegible].

[illegible] [illegible] [illegible] of the well, [illegible] of the [illegible] by the [illegible] [illegible] [illegible].

[illegible] [illegible] in putting down the [illegible] the well.

Record and Sketch. Here is a copy of his record of the boring together with the [illegible] [illegible] the [illegible] [illegible] steps passed through:

"A Record of the M. [illegible] Oil Well, [illegible] Township, Jefferson County, Pa.

[illegible]

[illegible]

Horses. The horses [illegible]

[illegible]

Recruit and Pickets. [illegible]

[illegible]

"18 to 25 feet wooden pipe.
" 30 White Sand Rock.
" 35 — — —
" 40 — — —
" 45 — — —
" 50 — — —
" 55 — — —
" 60 92 Shale Rock. ["[illegible] Bottom [illegible]"]
" 92 131 Red Rock. ["[illegible]; [illegible]; easier than [illegible] of the [illegible] centre [illegible]"]
" 131 [illegible] Shale Rock. ["White; [illegible] [illegible]"]
" [illegible] [illegible] Red Rock. ["[illegible] of that [illegible] (with [illegible] another red rock) [illegible] [illegible]"]
" [illegible] [illegible] Shale [illegible] [illegible] [illegible]
" [illegible] 202 — — 202 [illegible]
" 202 230 Slate R. 210 [illegible]
" 230 245 White [illegible] [illegible]
" [illegible] 260 Slate R.
" 260 264 Red R. ["[illegible] as red as before."]
" 264 320 Blue Sand Rock.
" 320 330 Slate Rock.
" [illegible] 356 [illegible] Sand Rock. "[illegible] [illegible] hard like flint."
" 356 410 Slate Rock; — gas 395.
" 410 419 Fine Sand Rock; 419 gas & [illegible].

'[illegible] 427 Sand rock; white particles. "Arsenic" [illegible] particles [illegible]
from [illegible] edge of [illegible] up [illegible]

'427 450 Slate

'450 485 Aluminous } "Very hard drilling; drilling a very fine blue

'485 488 Aluminous } flour; kept there [illegible] to the [illegible]"

'488 550 Hard Slate. 583 Strong gas.

'550 700 Slate and Sand layers alternately.

'700 722 Slate and Sand alternately. [illegible]

'722 872 Red; very red. [Sand; the reddest [illegible] red rock;
very [illegible].]

'872 881 Sand Rock."

History of the Boring. Before the boring was begun a large [illegible] was driven through the earth to the solid rock and around [illegible] the [illegible] pipe was fixed upon the rock; and through the pipe the boring was done. The sand pump was always employed in the boring [illegible] the pipe, and then the chippings or boring [illegible] were found very much mixed together.

[illegible] (Gilley, 1879): "On the nineteenth day [illegible] 1865 after [illegible] and two [illegible], and drilling [illegible] "Arsenic ore" at [illegible] 3 feet [illegible] and mixed it with water [illegible] and found the water was colored just the same as the water [illegible] getting out of the well with the sand pump. That was the hard [illegible] that is charged to the company about that. That was the first thing that gave us any idea about iron ore in the well."

[illegible] Johnson's statement [illegible] (Gilley, 1879) confirms in the main [illegible] company. Some [illegible] with the "Arsenic ore" [illegible] is said, [illegible] Dr. [illegible] Knight, a druggist, of [illegible]ville, went to the well,

[illegible] some curiosity, with an interest [illegible] in the [illegible]
[illegible] wells, to look into this strange history of [illegible] thing.
[illegible] is said I have been informed that the ore found at
the well was the same [illegible] mixed with this ore of [illegible] foundry. The
ore is still at the foundry and is said by Mr. Brown to have
been brought to these wells by himself from [illegible] and
[illegible] Lake Superior ore. It is a large [illegible] of [illegible]
[illegible] of the dark red hematite very pure looking and is
[illegible] the only [illegible] such ore ever brought to this
[illegible] Moore, an agent of a company of [illegible]
[illegible] to have made not long ago some test of the ore
[illegible] found at the well and traced the lead [illegible]
[illegible] to the ore of Lake Superior [illegible] regarding
[illegible] is also [illegible] visited the well
[illegible] and I have got [illegible] some of the chippings
[illegible] of specular ore. [illegible] the [illegible] of May [illegible]
[illegible] at the well myself and saw the mode in which chip-
pings of specular ore are mixed with chippings of [illegible]
iron and other rocks are brought up. An auger made
for boring into loose, soft earth is bored into the rubbish in
the hole around the wooden pipe at the top of the well.
[illegible] and [illegible] then brings up, from the hole made by
the auger, a mass of chippings and muddy water
and these are poured into a pail, taken to the creek and

raised clean. The boring with this auger is done through a small trap door in the flooring above the well. It is done by Mr. Reed (brother in law of Capt. Steck), and another man, both of whom are said to be thoroughly honest. Mr. Beck, the owner of the land with Capt. Steck seems to be a remarkably honest man. Besides those already mentioned, Messrs. P. W. Jenks and George Jenks and Capt. Steck, all of them [illegible] in the matter, seem to be the only ones who could have either any interest or any chance to perpetrate any deception in the boring.

Conclusions. It is clear that it is quite impossible that any body of specular iron ore can be found in the rocks passed through by this boring; for it is plain that these rocks are only such as might be looked for within nine hundred feet or so below the coal measures, and it is well known that none of them bear specular ore in the whole Alleghenian region. Specular iron ore, moreover, is crystalline and is only found in altered, crystalline rocks, such as are not known within a great distance of this well. The redness of the water caused by the red rocks bored through is no proof of the presence of such an ore bed, for red sandstones or shales would give the same color. It is likely, too, that the specular ore would have been much harder to bore than the upper red rocks are reported to have been. It seems hardly possible that some bed of conglomerate passed through in the boring may have had in it larger or smaller bits of specular iron ore, the rubbish of some older rocks brought here while the conglomerate was forming, and giving rise in the

boring to the great quantity of chippings of such ore found. But this is very unlikely, and it is very likely that many ancient masses of quartz ore would have been changed into brown hematite or bog ore long before the conglomerate became a hard rock. Unlikely as such a supposition is, it may yet seem preferable to the only other one that seems possible; namely, that somebody among those already mentioned as being about the well, or (perhaps still less likely) somebody else without their knowledge, has from intent, mischief or carelessness, either put these chippings of quartz ore into the hole made by the auger through the trap door, or at the time of the first boring dropped such ore into the well or into the hole around the wooden pipe. The ore could hardly have been dropped into the well without the knowledge of the borers.

As might have been expected, carbonate of iron and carbonate of iron changed to brown hematite are found among the chippings from the well; but how thick the beds of ore may have been cannot be seen in the record of the well, and can only be guessed by the thickness of such beds in the same group of rocks at their nearest outcrops.

Benj. Smith Lyman.

135 South Fifth Street, Philadelphia,

13 May, 1879.

135 South Fifth Street, Philadelphia;
13 May, 1869.

A. Edwards Esq.

Montgomery, Ala.

My dear Sir:

Your favor of the first came to hand yesterday on my return to the city.

I would urge you by all means to sink such a shaft as you suggest in such a place as to show the thickness of the plumbago deposit. A trial shaft of that kind will add very much to the value of a geological survey.

It is possible that I may be able to go south sooner than I expected when I wrote last, say [illegible], next week; and in that case I will let you know [illegible] of it. It will be desirable therefore to have the trial pit begun right away.

Very truly yours.

Benj. Smith Lyman.

46

[illegible]

[illegible]

[illegible] Esq.

Montgomery, Ala.

My dear Sir:

[illegible]

I would urge you by all means [illegible]

[illegible]

It is possible that I may be able [illegible]

[illegible]

Very truly yours,

Booker T. Washington.

35 South Fifth Street, Philadelphia; 31 May, '67.

Dear Alloy:

Your entertaining favor of the second of this month only came to hand yesterday on my return home from an absence in the mountains; for the letter carrier had somehow failed to get my order to forward my letters to me. I had begun to think that my getting no letters arose from this and my correspondents' inability to spell the name of my post office, Punxsutawney. This village is in the eastern edge of Jefferson County in this state, west of the Alleghany mountains, I may as well tell you so, preciselyfor else I would not find it any other way, of course. I went there to stay in that region for several weeks, a month or two; but after taking a general view of the region it proved to be desirable to come down to the city for a day or two at least to enable a point to be decided, namely, in regard to the purchase by parties interested here of a certain tract that was in a the [illegible] situation. Now that I am here it seems very likely that (as I thought likely it would turn out) I shall not have to go back there again; as the information that seemed to be most wished for has probably been got already, and a second examination may in any case perhaps be indefinitely postponed. At the same time, my Alabama correspondent has written that he will await my convenience, and as I shall be likely to go there, perhaps early next week, if I do not go back to Punxsutawney. There are other projects connected with the Alabama trip, and still others independent of all these; so that I feel pretty confident of finding work to do now for some time to come. In fact it seems as if the tide had turned at last, and ~~[illegible]~~ mining business would be better and better now. — Jefferson County, where I was, is in some respects a very interesting one. It is very wild and woody, and lumbering is the main business of the people there, and this is the season for rafting. Punxsutawney is a village of some five hundred inhabitants, and is one of the [illegible] villages of the county. Throughout my trip I had for a companion a young man of this city, named [illegible], [illegible] of one [illegible] [illegible] interested in the survey, and [illegible]

47

[illegible] North Fifth Street, Philadelphia, [illegible] May, [illegible]

[illegible]

Your [illegible] favor of the [illegible] of this month [illegible]

[illegible]

[illegible] at Freiberg. We were met at Indiana, [illegible] railroad, [illegible] and [illegible] Jenks and taken by him in his carriage to [illegible], twenty seven miles to the north; and lodged in his [illegible]. He drove us about the country to look at the [illegible] of [illegible] that were to be examined, and a part of the time we staid at night at a hotel in the neighbouring village of Reynoldsville. Mr. Jenks's family was quite an agreeable one; his wife, a pleasant woman of Pennsylvania [illegible] [illegible]; his oldest son, just grown up, a lively young man; his two daughters, three & four years old, the elder quiet and silent, the younger [extremely] talkative and lively, like her father's side of the family; his mother also talkative, one of the earliest settlers of the place and declaring that he was the first white child born there; his niece Miss Sally (Henwright?) who reached Indiana by the same train as we did and whom he had met at Pittsburg on her way from Illinois to make a short visit, handsome and [illegible] and western, though born at [illegible]; and another [illegible] lady, [illegible] called [illegible] mother grandmother, but who was commonly called Miss [illegible], her last name being Beasley, and she being only on a visit from [illegible] County, further Southwest, handsome, well spoken, better educated than some of the others, having some [illegible] and playing the piano, and [illegible] of [illegible]. Miss Sally came from only eight miles south of [illegible], and had acquaintances there; but I could not [illegible] [illegible] the names of any of ours there except [illegible] and his wife [illegible] [illegible] [illegible] had not heard them. On our way from the [illegible] [illegible] in the carriage the first day her uncle joked her a good deal about the comparative advantages of her country and his. On Sunday afternoon Messrs. Jenks, [illegible] and I went over to Brookville, the County town, [illegible] and passed the night there in order to see some men there the next morning. Court week began there and as we came away, towards noon, we met great numbers of country people flocking in. Mr. Jenks is a lawyer and seems to be the principal one of the county or one of the principal ones; and he has several younger brothers and brothers-in-law who are also lawyers in that or adjoining counties; so that there is hardly a case tried there that one of them is not concerned in, and they are often on opposite sides. He is a very [illegible] [illegible] — I saw Mr. [illegible] here yesterday, and he had seen Lizzy at [illegible] [illegible] the evening before. He had been in hopes of taking her up to [illegible], and

[illegible]

[illegible] Philadelphia, [illegible]

[illegible] Esq.

[illegible] Iron Works, New York.

My [illegible]

[illegible] with your [illegible] yesterday, [illegible] Hansell's [illegible] and as [illegible] the Cars, [illegible] take [illegible] and that it would [illegible] twenty five hundred [illegible] three thousand dol[illegible] [illegible] particularly [illegible] [illegible] for them are already [illegible] where they ought to be put together [illegible] [illegible] for the purpose. — It would be [illegible] [illegible] and [illegible]

[illegible] R. C. Thomas [illegible] morning [illegible] and I will then [illegible]

[illegible] am here [illegible] already [illegible] longer than [illegible] after all that I shall [illegible] the pleasure of [illegible] next week.

Very truly yours,

Benj. Smith Lyman.

[illegible] Philadelphia, [illegible]

[illegible],
Architectural [illegible].

[illegible]:

I enclose herewith Mr. C. C. Turner [illegible] of the [illegible] American [illegible] Manufacturing Company [illegible]

Very truly yours,
Benj. Smith Lyman.

135 [illegible] St., Philadelphia, 21st May, 18[illegible]
(Morning)

Richard H. Allen Esq.
189 Water Street,
New York.

My dear Richard:

Your welcome favors of the thirteenth and ~~twentieth~~ ~~both~~ came duly to hand; but I have been putting off an answer to the first [other] in daily hopes of being able to say something definite about going to New York as you so kindly suggest. I have been up in the mountains but came home ten days ago to see some business men here on a matter of importance, and met them last Saturday. The meeting was adjourned over to Monday afternoon; in the mean time one of them had to go to New York on important business, and the meeting has been put off ever since from one day to the next in expectation of his coming back. It seems likely at length that the meeting will take place this afternoon, and then I shall be able to tell what my next movements will be. If I find myself free to do so it will give me great pleasure to spend Sunday with you, and I will try to let you know this evening whether I can go or not. It will be an added pleasure to the visit to see Henry and his wife. If I cannot go perhaps you can give me some idea of the ore by sending in a letter a bit of it as big as your thumbnail. If it should prove worth while, a complete assay of it might be made either in New York or here. — I have been [a fortnight] in the mountains of Western Penn. &c., ~~and~~ may go back there for several weeks; in that case perhaps you can visit me in ~~the~~ wilds.

Very truly yours,
Benj. Smith Lyman.

51

[illegible] Phila[illegible] Aug [illegible]

[illegible] Esq.

[illegible]
New York.

My dear Richards:

Your welcome favour of the [illegible] came [illegible] but I have been putting off [illegible]

[illegible]

[illegible]

[illegible] the Continental, and [illegible] found [illegible] [illegible] about seventeen. The [illegible] [illegible] [illegible] [illegible] [illegible] a mile of [illegible] [illegible] and [illegible] place [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] in England [illegible] [illegible] the same [illegible] [illegible] Canada [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] Lyman. The two [illegible] [illegible] [illegible]

135 South Fifth Street, Philadelphia,
2 May 1879.

C. W. Gordon Esq.
Architectural Iron Works [illegible]

My dear Sir:

Your two favors of yesterday and day before have both come to hand this morning.

I dropped in at Mr. Thomas's, and told him that Mr. Case had come home; and Mr. Thomas said Mr. Case had been there himself yesterday, and had seen him. I was not told whether the account was settled or not.

It is not quite likely that I may be here after all until next Wednesday, and in that case I shall be at the meeting. After that I shall most likely be away from home for a couple of weeks or more on business.

Very truly yours,
Benj. Smith Lyman.

[illegible] Philadelphia, 22 [illegible]

[illegible] Sydney [illegible]

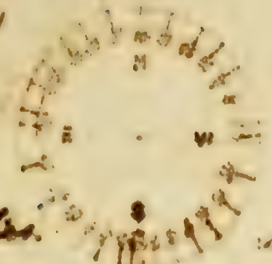
[illegible]

[illegible] I am not sorry that you did not call [illegible]; for I [illegible] anxious [illegible] [illegible] [illegible] [illegible], and on this account [illegible] [illegible] [illegible] it will be well [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] it will never be worth more than that [illegible] and I am [illegible] satisfied with [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

I thank you very much for your kind wishes in my behalf in reference to the American Legation at London. I should like such a position as you speak of very well, and should not object to it on account of its [illegible] my character, as I should not expect to follow that [illegible] all my life. Before the presidents inauguration there was no end of gossip on all sides by everybody about the offices they would take; the President kept so dark about his appointments, and discouraged direct applications for office, and as it turned out, actually did appoint Cabinet officers who had no expectation whatever of being appointed (among others my friend Judge Hoar of [illegible] county, Attorney General, and one of the best, if not the very best, of the whole Cabinet, although the least widely known outside of the commonwealth). At the time [illegible] one of the first was consulships or secretaryships of legation [illegible] what I learned what turned (after the corresponding enthusiasm) — alas! after the Cabinet appointment was made there was no [illegible] of unpretending merit for the best places of government, but application for offices must be made and backed by the best political influence possible and [illegible] for comparison with similar claims. As for Mr. Motley, it would no doubt be more agreeable to be attached to his legation than to any other, but I fear that one of [illegible] would want a man better known [illegible] than I should get. Because of [illegible] I believe [illegible] in his family [illegible] well [illegible] while he, [illegible] has [illegible] of me, though his brother [illegible] is an old and particular friend of mine [illegible] was perhaps [illegible] by me [illegible] in any other [illegible], I think I should fancy a little different [illegible] experience [illegible] mingling in general politics, and agree with you that it would [illegible] — Meantime, I hope to improve as a geologist and surveyor with the help of London libraries and learned men's society there; for business has become a little quicker and promises to be better than it has been for a couple of years past. I am now here in the city for only a few days, and [illegible] go to Tilton next week, for a couple of weeks or perhaps longer, before going again to the mountains [illegible] — I am delighted at the prospect of your having a little holiday, and although you do not explicitly say so, I hope it is to these parts that you will come at that time. In that case, I hope I shall be able to [illegible] at home, and beg that you will let me know in time to bring it about if at all possible.

I give my best regards to your wife and niece, and believe me as ever

very affectionately yours. Benj. Smith [illegible]



[illegible]	Angles				Marks
8.	0°	0'	21"	(South)	—— 8
7.	0°	35'	30"		——
[illegible]	0°	38'	20"		—— 8
[illegible]3	1°	3'	40"		—— ·3
[illegible]	1°	40'	40"		—— ·5
[illegible]	2°	16'	50"		——
[illegible]	[illegible]°	52'	20"		——
[illegible]	3°	39'	0"		——
[illegible]	4°	3'	30"		—
[illegible]	4°	33'	20"		——
[illegible]	5°	5'	50"		—
	5°	44'	20"		—— 9.
[illegible]·7	6°	26'	30"		——
[illegible]	6°	44'	30"		—
[illegible]1	7°	14'	0"		——
[illegible]	7°	39'	50"		—
[illegible]·15	8°	7'	10"		——
[illegible]·175	8°	38'	20"		—
[illegible]·2	9°	7'	10"		—— ·2
[illegible]·225	9°	39'	50"		—
[illegible]·25	10°	14'	40"		——
9·275	10°	57'	30"		—
9·3	11°	30'	30"		——
[illegible]·32	12°	3'	30"		—
[illegible]	12°	35'	10"		——

9·36	13°	14'	40"	——
9·38	13°	52'	50"	—
9·4	14°	32'	50"	—— ·4
9·41	14°	53'	40"	—
9·42	15°	15'	0"	——
9·43	15°	36'	50"	——
9·44	15°	59'	10"	—
9·45	16°	22'	10"	——
9·46	16°	45'	40"	—
9·47	17°	9'	50"	——
9·48	17°	34'	40"	——
9·49	18°	0	0"	—
9·5	18°	26'	10"	—— ·5
9·51	18°	52'	50"	—
9·52	19°	20'	10"	——
9·53	19°	48'	20"	——
9·54	20°	17'	20"	—
9·55	20°	47'	0"	——
9·56	21°	17'	20"	—
9·57	21°	48'	40"	——
9·58	22°	[illegible]	40"	—
9·59	22°	53'	40"	—
9·6	23°	27'	40"	—— ·6
9·61	24°	2'	30"	—
9·62	24°	38'	10"	——
9·63	25°	15'	0"	——
9·64	25°	52'	50"	—
9·65	26°	31'	50"	——

Sig[n]atures	Longitude			Lat[itude]
6.	00	06'	21"	6 (South)
7.	00	37'	30"	
[illegible]	02°	38'	20"	
8.3	1°	5'	40"	8
[illegible]	1°	10'	40"	.5
[illegible]	2°	16'	50"	5
[illegible]	[illegible]	52'	20"	
	3°	39'	0"	
	4°	3'	38"	
	4°	33'	25"	
[illegible]	5°	0	52"	
	58	44'	25"	
[illegible]	6°	26'	[illegible]	9
[illegible]	[illegible]	[illegible]	[illegible]	
1	[illegible]	14'	0"	
[illegible]	7°	39'	50"	
9.15	8°	7'	10"	
9.175	8°	38'	20"	
9.2	9°	7'	10"	
9.225	9°	39'	50"	2
9.25	10°	14'	40"	
9.275	10°	51'	30"	
9.3	11°	31'	30"	
9.32	12°	3'	30"	
9.33	12°	[illegible]	10"	

9.38	13°	19'	40"	
9.39	13°	52'	50"	
9.40	14°	32'	50"	.4
9.41	14°	53'	40"	
9.42	15°	15'	0"	
9.43	15°	36'	50"	
9.44	15°	57'	10"	
9.45	16°	22'	10"	
9.46	16°	45'	40"	
9.47	17°	9'	50"	
9.48	17°	31'	40"	
9.49	18°	0	0"	
9.5	18°	26'	10"	.5
9.51	18°	52'	50"	
9.52	19°	20'	10"	
9.53	19°	[illegible]	10"	
9.54	20°	17'	20"	
9.55	20°	47'	0"	
9.56	21°	17'	20"	
9.57	21°	[illegible]	40"	
9.58	22°	[illegible]	40"	
9.59	22°	53'	40"	
9.6	23°	27'	40"	.6
9.61	24°	2'	30"	
9.62	24°	38'	10"	
9.63	25°	15'	0"	
9.64	25°	52'	50"	
9.65	26°	31'	50"	

9·66	27°	12'	0"	—
9·665	27°	35'	10"	—
9·68	28°	35'	50"	—
9·69	29°	19'	30"	—
9·7	30°	4'	40"	—
9·705	30°	27'	50"	—
9·71	30°	50'	20"	—
9·715	31°	15'	10"	—
9·72	31°	39'	20"	—
9·725	32°	3'	50"	—
9·73	32°	28'	50"	—
9·735	32°	54'	20"	—
9·74	33°	20'	10"	—
9·745	33°	46'	20"	—
9·75	34°	13'	0"	—
9·755	34°	40'	10"	—
9·76	35°	[illegible]	[illegible]	—
9·765	35°	35'	50"	—
9·77	[illegible]	4'	30"	—
9·775	36°	33'	40"	—
9·78	37°	3'	10"	—
9·785	37°	35'	20"	—
9·79	38°	4'	0"	—
9·795	38°	35'	20"	—
9·8	39°	7'	10"	—
9·805	39°	39'	40"	—
9·810	40°	12'	50"	—
9·815	40°	46'	40"	—
9·82	41°	21'	10"	—
9·825	41°	56'	20"	—
9·83	42°	32'	20"	—
9·835	43°	9'	0"	—
9·84	43°	46'	30"	—
9·845	44°	24'	50"	—
9·85	45°	4'	0"	—
9·855	45°	44'	10"	—
9·86	46°	25'	20"	—
9·8625	46°	46'	10"	—
9·865	47°	7'	30"	—
9·8675	47°	28'	50"	—
9·87	47°	50'	50"	—
9·8725	48°	12'	40"	—
9·875	48°	34'	50"	—
9·8775	48°	57'	30"	—
9·88	49°	20'	20"	—
9·8825	49°	43'	30"	—
9·885	50°	7'	0"	—
9·8875	50°	30'	50"	—
9·89	50°	55'	10"	—
9·8925	51°	19'	40"	—
9·895	51°	44'	30"	—
9·8975	52°	9'	50"	—
9·9	52°	35'	30"	—
9·9025	53°	1'	40"	—
9·905	53°	28'	10"	—
9·9075	53°	55'	0"	—
9·91	54°	22'	20"	—

9·68	27°	12'	0"
9·685	27°	33'	10"
9·69	28°	38'	50"
9·695	29°	14'	30"
9·7	30°	4'	40"
9·705	30°	47'	50"
9·71	30°	58'	20"
9·715	31°	15'	10"
9·72	31°	39'	20"
9·725	32°	3'	50"
9·73	32°	25'	50"
9·735	32°	47'	20"
9·74	33°	20'	10"
9·745	33°	46'	20"
9·75	34°	13'	0"
9·755	34°	40'	10"
9·76	35°		30"
9·765	35°	32'	50"
9·77	36°	4'	30½"
9·775	36°	33'	40"
9·78	37°	3'	10"
9·785	37°	38'	20"
9·79	38°	4'	0"
9·795	38°	38'	20"
9·8	39°	7'	10"
9·805	39°	39'	40"
9·81	40°	12'	50"
9·815	40°	45'	40"

9·82	41°	21'	10"
9·825	41°	58'	20"
9·83	42°	32'	20"
9·835	43°	9'	0"
9·84	43°	46'	30½"
9·845	44°	24'	50"
9·85	45°	4'	0"
9·855	45°	44'	10"
9·86	46°	25'	20"
9·8625	46°	46'	10"
9·865	47°	7'	30½"
9·8675	47°	28'	50"
9·87	47°	50'	50"
9·8725	48°	12'	40"
9·875	48°	34'	50"
9·8775	48°	57'	30"
9·88	49°	20'	20"
9·8825	49°	43'	30"
9·885	50°	7'	0"
9·8875	50°	30'	50"
9·89	50°	53'	10"
9·8925	51°	19'	40"
9·895	51°	41'	30½"
9·8975	52°	9'	50"
9·9	52°	35'	30½"
9·9025	53°	1'	40"
9·905	53°	28'	10"
9·9075	53°	55'	0"
9·91	54°	22'	20"

9.9125	54°	50'	20"
9.915	55°	18'	40"
9.9175	55°	47'	30"
9.92	56°	86'	50"
9.9225	55°	46'	50"
9.925	57°	17'	20"
9.9275	57°	48'	20"
9.93	58°	20'	10"
9.9325	[illegible]	[illegible]	30"+
9.935	[illegible]	25'	40"
9.9375	[illegible]	[illegible]	30"+
9.94	[illegible]	36'	10"
9.9425	[illegible]	[illegible]	50"
9.945	[illegible]	46'	10"
9.9475	62°	23'	30"
9.95	63°	1'	50"
9.9525	63°	41'	20"
9.955	64°	22'	0"
9.9575	65°	3'	50"
9.96	65°	47'	10"
9.961	66°	4'	50"
9.962	66°	22'	50"
9.963	66°	41'	0"
9.964	66°	59'	30"+
9.965	67°	18'	20"
9.966	67°	37'	20"
9.967	67°	58'	50"
9.968	68°	16'	30"-
9.969	68°	36'	30"-
9.97	68°	56'	50"
9.971	69°	17'	40"
9.972	69°	38'	50"
9.973	70°	0'	20"
9.974	70°	22'	20"
9.975	70°	44'	40"
9.976	71°	7'	40"
9.977	71°	31'	0"
9.978	71°	55'	0"
9.979	72°	19'	30"+
9.98	72°	44'	40"
9.981	73°	10'	30"+
9.982	73°	37'	0"
9.983	74°	4'	20"
9.984	74°	32'	30"+
9.985	75°	1'	40"
9.986	75°	31'	50"
9.987	76°	3'	0"
9.988	76°	35'	30"+
9.989	77°	9'	30"+
9.99	77°	45'	10"
9.991	78°	22'	30"+
9.992	79°	2'	10"
9.993	79°	44'	30"
9.994	80°	29'	50"
9.995	81°	19'	20"
9.996	82°	14'	10"
9.997	83°	16'	20"
9.998	84°	30'	20"
9.999	86°	6'	50"
10.000	90°	0'	0" (north)

9.9125	54°	50'	20"
9.915	55°	18'	40"
9.9175	55°	47'	30"
9.92	56°	16'	50"
9.9225	56°	46'	50"
9.925	57°	17'	20"
9.9275	57°	48'	20"
9.93	58°	20'	10"
9.9325	58°	[illegible]	30½"
9.935	59°	25'	40"
9.9375	[illegible]	[illegible]	30½"
9.94	[illegible]	34'	10"
9.9425	[illegible]	[illegible]	50"
9.945	61°	46'	10"
9.9475	62°	23'	30"
9.95	63°	1'	50"
9.9525	63°	41'	20"
9.955	64°	22'	0"
9.9575	65°	3'	50"
9.96	65°	47'	10"
9.961	66°	4'	50"
9.962	66°	22'	50"
9.963	66°	41'	0"
9.964	66°	59'	30½"
9.965	67°	18'	20"
9.966	67°	37'	20"
9.967	67°	56'	50"
9.968	68°	16'	30½"
9.969	68°	36'	30½"
9.97	68°	56'	50"
9.971	69°	17'	40"
9.972	69°	38'	50"
9.973	70°	0'	20"
9.974	70°	22'	20"
9.975	70°	44'	40"
9.976	71°	7'	40"
9.977	71°	31'	0"
9.978	71°	55'	0"
9.979	72°	19'	30½"
9.98	72°	44'	40"
9.981	73°	10'	30½"
9.982	73°	37'	0"
9.983	74°	5'	20"
9.984	74°	32'	30½"
9.985	75°	1'	40"
9.986	75°	34'	50"
9.987	76°	5'	0"
9.988	76°	35'	30½"
9.989	77°	9'	30½"
9.99	77°	45'	10"
9.991	78°	22'	30½"
9.992	79°	2'	10"
9.993	79°	44'	30"
9.994	80°	29'	50"
9.995	81°	19'	20"
9.996	82°	14'	10"
9.997	83°	16'	20"
9.998	84°	30'	20"
9.999	86°	6'	50"
10.000	90°	0'	0" (Zenith)

[illegible] Philadelphia, [illegible]
1869.

[illegible]

[illegible] Governing [illegible]

[illegible]

[illegible] of the [illegible] of this [illegible]
[illegible] longer than I thought
[illegible] you have perhaps had [illegible]
[illegible]
[illegible] you [illegible]
[illegible] by [illegible]
[illegible]
[illegible]
[illegible] telegraph this morning.
[illegible]

[illegible]

[illegible]

[illegible] Prescott Esq.

No. [illegible]

Dear Sir:

I would make the [illegible] and report with reference to the charge upon the having [illegible] you [illegible] of the [illegible] for [illegible] hundred dollars, payable on delivery of [illegible].

I can think of no one for you to ask to do the work in my absence from the city should it be too long for me [illegible] unless it be Mr. Joseph Rogers Jr., at Prof. John F. Frazer's [illegible] Street above Fifteenth (No 1513?), if he be in town.

If you wish it I may be able to give you further information of my movements or regarding the letter of my [illegible] by Tuesday; and it is hardly possible that he [illegible] a willingness to have the journey delayed a little, or [illegible] a [illegible] visit.

Respectfully yours,

Benj. Smith Lyman.

[illegible] Street, Philadelphia [illegible] May [illegible]

[illegible]

[illegible] Broadway [illegible] New York.

[illegible]

[illegible] interested in seeing my friend Dr. Koenig [illegible] and [illegible] with [illegible] before [illegible] answer to your proposal [illegible] which [illegible] their terms. They are very reasonable [illegible] and [illegible] you can [illegible] fully upon the [illegible] Koenig [illegible] good chemist, and [illegible] although he is in partnership [illegible] for the manufacture of certain chemicals by [illegible] inventions. [illegible] understand [illegible] dollars for finding out the amount of one metal in a [illegible] [illegible] metal [illegible] place [illegible] [illegible] [illegible] in one [illegible] (say, Gold, silver, [illegible] different [illegible] reduction of [illegible] that Dr. Koenig is [illegible] [illegible] thinking that your [illegible] [illegible] [illegible] [illegible] good [illegible]. One of the [illegible] for some [illegible] friends [illegible] who will [illegible] [illegible] your correspondence [illegible] further they say.

You can write to him or them to the address [illegible] and send the [illegible] by express; and if you wish [illegible] anything further [illegible] [illegible] [illegible] [illegible] according to the [illegible] quantity of each metal with reference to [illegible] if [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] and [illegible] to him again with pleasure, for I expect to be here [illegible] or possibly Tuesday before starting [illegible].

Give my best regards to Henry and his wife, if they are still in New York, and believe me

Very truly, yours.

Benj. Silliman.

1? South Fifth Street, Philadelphia; 29 Aug 6?

B. H. [illegible] Esq.

[illegible] Broadway, New York.

My dear Sir:

Please [illegible] to Mr. [illegible] If he should wish to [illegible] [illegible] with me [illegible] expect to return [illegible] [illegible] [illegible] [illegible] Thursday [illegible] [illegible] of Tuesday; in which way address them [illegible] in the name of A. Edwards [illegible] Box No. 1 Post Office [illegible] [illegible].

News of [illegible] death came [illegible] yesterday after= noon. [illegible] is a sad loss indeed to her family and friends, but must have [illegible] to her a most desirable release; [illegible]

Very truly [illegible].

[illegible]

[illegible]

The "pet theme" you speak of [illegible] really a very attractive one, and [illegible] most desirable [illegible] that you [illegible] so probable in [illegible]. But I [illegible] of some one who would not only be very [illegible] in any way, if allowed to do so; [illegible] these circumstances [illegible] above all for some [illegible] past [illegible] wished to do so, at [illegible] the doubts [illegible] to hinder you from carrying [illegible] the doubts you speak of as likely [illegible] theme are, perhaps, in [illegible] the natural [illegible] such grave [illegible] at trying yourself [illegible] many daily cares and [illegible] you would find [illegible] endless doubts in [illegible] as well as [illegible] reflection [illegible] possible, would hardly [illegible] you would be right in [illegible].

I [illegible] evening next [illegible] three weeks [illegible] friends here. [illegible] with [illegible] may turn up [illegible] full of work for the [illegible] too, although [illegible] as lively as [illegible] I spent [illegible] time of [illegible] to see [illegible] I am [illegible] to get [illegible] for any [illegible] what I should be! [illegible] would [illegible] Carey A. Edwards [illegible] something [illegible] the whole [illegible] you [illegible] more [illegible] little [illegible]

[illegible] Parry [illegible]

[illegible] good [illegible]

[illegible] in the [illegible]

Lizzy [illegible] C.C. [illegible]

[illegible] He is [illegible]

[illegible] He is [illegible]

[illegible] He looks much younger than [illegible] would make him [illegible] Philadelphia [illegible] president [illegible]

[illegible]

Report of assay of three coals and a coke furnished by Mr. [illegible] Read, particularly of the volatile matter, coke and ashes of the coals and of the ashes of the coke; by Benjamin Smith Lyman, Mining Engineer, of No. 135 S. Fifth Street, Philadelphia.

I.

Of the samples of coal and coke furnished by Mr. Read the first, a coal, was marked: "7 ft. Seam – [illegible]." There was perhaps half a pound of it. It was a very bright shining, black, pitch-like coal, with a black [illegible], and with a [illegible] [illegible] [illegible] the [illegible] in bedding. Its specific gravity was (mean of two trials, $\frac{1,32 + 1,32}{2}$, or the like) 1,32 times that of water. It yielded of coke (mean of three trials, 86,3 + 86,1 + 85,8 + 86,0 [illegible]) 86 per cent., the remainder (13,7 + 13,9 [illegible] or 14 per cent.) being volatile matter; and of ashes (mean of second and third trial, $\frac{3.85 + 3.80}{2}$) 3,8 percent. ([illegible] one eighth [illegible]). The ashes were of a pale yellow color, or yellowish white.

II.

The second sample was marked: "Powelton Coal & Iron Co. Powelton Steam Coal – 2nd quality – from Chamber. Broad Top Coal Region – Dec. 1868." There was perhaps a pound and a half of it. It was a very black, brilliantly shining coal, columnar in structure at right angles with the bedding, with a black powder, and with two or three thin layers of slate running through the lump. Its specific gravity was a mean of two trials, ($\frac{1,32 + 1,36}{2}$ =) 1,34 times that of water. It yielded of coke (a mean of two trials $\frac{84,5 + 84,5}{2}$ = 84,5) eighty four and a half per cent, or less [illegible] 15,5 per cent [illegible] the volatile [illegible]; [illegible] of ashes the same trials gave ($\frac{4,8 + 5,6}{2}$ = 5,2) five and two tenths per cent. The ashes were almost pure white, with a very light tinge of yellow and a few small specks of dark brown red, almost black, rough grains.

III.

The third sample of coal was marked: "Powelton Coal & Iron Co. Powelton Steam Coal. Best Quality – Broad Top Coal Region – Dec. 1868." There was also of this perhaps a pound and a half. This coal

was very bright shining, black, with black powder, with some two or three extremely thin seams of slate and a few small bits of pyrites, and with a columnar structure at a [illegible] angle with the bedding. Its specific gravity was (mean of two trials, $\frac{1,32 + 1,32}{2} = 1,32$) 1,32 times that of water. It yielded of coke (mean of two trials, $\frac{85,8 + 85,6}{2} = 85,7$) eighty five and seven tenths per cent, leaving ($\frac{14,2 + 14,4}{2} = 14,3$) fourteen and three tenths percent of volatile matter; and of ashes the same two trials gave ($\frac{4,3 + 4,3}{2} = 4,3$) four and three tenths percent. The ashes were white slightly yellowish.

IV.

The sample of coke was perhaps a pound in weight. It was of a steel gray color, with metallic lustre, very compact and hard. It was marked: "Coke from Barnet Coal, made in open air pits good quality Broad Top Coal Region Dec. 1868." It yielded of ashes (mean of two trials, $\frac{12,2 + 12,0}{2} = 12,1$) twelve and one tenth per cent. The ashes were of a light purplish brown color, or pinkish and light yellow mixed.

Benj. Smith Lyman.

Philadelphia; 2 June, 1869.

was very bright shining, black, with thick powder, with some two or three scattered thin scales of talc and a few small bits of pyrites, and with a [illegible] character [illegible] coupled with its cohesion. The specific gravity was mean of two trials $(\frac{1.32+1.33}{2}=1.32)$ one and thirty-two hundredths. The yield of Coke (mean of two trials $\frac{85.8+85.6}{2}=85.7$) eighty five and seven tenths per cent, leaving $(\frac{14.2+14.4}{2}=14.3)$ fourteen and three tenths per cent of volatile matter. On [illegible] the ashes were mean of two trials $(\frac{4.3+4.3}{2}=4.3)$ four and three tenths per cent. The ashes were of a slightly yellowish.

IV.

The sample of Coke was [illegible] [illegible]. It was of a steel gray color, with [illegible] lustre, very compact and hard. It was marked: "Coke from [illegible] Coal, made in [illegible] [illegible] [illegible] Coal Region. No. 105." The yield of ashes (mean of two trials $\frac{12.2+12.0}{2}=12.1$) twelve and one tenth per cent. The ashes were of a [illegible] color [illegible] tinged.

Benj. Smith Lyman.

Philadelphia, 2 June 1869.

Robert Hare Powel Esq
To Benj: Smith Lyman Dr.
2 June 869. To Assay of 3 Coals in Lc Co. at $10 $30.
Received Payment,
Benj: Smith Lyman.

73

Robert Hare Powel Esq
To Benj: Smith Esqr Dr
June 18th To carry of 3 lott on 12 St. [illegible] $30
Received Payment
Benj: Smith Esqr

Name.	Assay.	Spec. Grav.	Vol. Mat. %	Coke %	Ashes %
I.	1	1,32	13,7	86,3	—
"Fulton Seam	2	1,32	13,9	86,1	3,8
best quality"	3	—	14,2	85,8	3,8
	4	—	14,2	85,8	—
	Mean	1,32	14,0	86,0	3,8
II.	1	1,32	15,5	84,5	4,1
"Fulton Seam	2	1,36	15,5	84,5	5,4
Upper Bench"	Mean	1,34	15,5	84,5	5,2
III.	1	1,32	14,2	85,8	4,3
"Barnet Seam	2	1,32	14,4	85,6	4,3
best quality"	Mean	1,32	14,3	85,7	4,3
IV.	1	—	—	—	12,2
"Coke from	2	—	—	—	12,0
Barnet Coal"	Mean	—	—	—	12,1

Name.	[illegible]	Spec. Grav.	Vol. [illegible]	Carbon [illegible]	Ash [illegible]
I. "[illegible] Seam best quality"	1	1,32	13,7	86,3	—
	2	1,32	13,9	86,1	3,8
	3	—	14,2	85,8	3,8
	4	—	14,2	85,8	—
	Mean	1,32	14,0	86,0	3,8
II. "[illegible] Seam [illegible]"	1	1,32	15,5	84,5	4,7
	2	1,36	15,5	84,5	5,4
	Mean	1,34	15,5	84,5	5,2
III. "Barnet Seam best quality."	1	1,32	14,2	85,8	4,3
	2	1,32	14,4	85,6	4,3
	Mean	1,32	14,3	85,7	4,3
IV. "Ash from Barnet Coal."	1	—	—	—	12,2
	2	—	—	—	12,0
	Mean	—	—	—	12,1

[illegible]

... had been offered him ...

[illegible] ... an application of ... [illegible]

Benj: Smith Lyman
has the honor of accepting
Miss Anable's
invitation for this evening.

135 South Fifth St.
4 June 1869.

7

[illegible] [illegible] Phil[illegible] [illegible]

[illegible] [illegible] [illegible]

[illegible]

In answer to your [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] would spend from two to three weeks with you [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] my charge would be [illegible] hundred and fifty dollars [illegible] half to be paid in advance [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] more, with the [illegible] [illegible] [illegible] [illegible] [illegible] all transportation and [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] the [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

[illegible] [illegible] you may find these terms [illegible] [illegible] [illegible]

Very respectfully,

Benj. Smith Lyman.

133 South Fifth Street, Philadelphia,
7th June, 1857.

Dear [illegible]:

As [illegible] for Alabama has been delayed [illegible] than was expected [illegible] you [illegible] [illegible] chance of [illegible] from there. — I am glad [illegible] you [illegible] about [illegible] and [illegible] in Alabama. — [illegible] yesterday [illegible] a [illegible] [illegible] and [illegible] in one corner [illegible]. [illegible] General [illegible] [illegible] it was [illegible] [illegible] [illegible] one, [illegible] it seemed a very good one. [illegible] in his uniform, [illegible] blue coat [illegible] with a red [illegible] over one shoulder, [illegible] [illegible]

[illegible] — If you think it worth while you might [illegible] the [illegible] Correspondent telegraphed a week ago [illegible] [illegible] that they [illegible] to send a remittance [illegible] [illegible] for the month. His letter [illegible] [illegible] although written [illegible] [illegible] the illness of his wife. He [illegible] [illegible]

[illegible] could not have much to say [illegible] certain amount of [illegible]
[illegible] to the [illegible] making [illegible] starting [illegible]
night. This [illegible] corresponds to a [illegible]
[illegible] a [illegible] of my friends [illegible]
[illegible] government [illegible] office. He
is a [illegible] from [illegible]
[illegible] the first time [illegible]
[illegible]. He [illegible] in the [illegible]
office [illegible] of the board [illegible]. The [illegible]
[illegible] has [illegible] the [illegible] have
[illegible] the [illegible]
vice president. The [illegible] secretary of the board has been [illegible]
[illegible] has been made secretary with [illegible]
[illegible]. He was [illegible]
[illegible] Scott, the great [illegible].
[illegible] by the horse car [illegible] came [illegible] and
[illegible] and [illegible] had to go
[illegible] half way on the [illegible]
[illegible] brought [illegible], but was [illegible]
[illegible] with a fire [illegible]
[illegible] with little wind and [illegible]
[illegible]. A little girl of [illegible]
[illegible] running out of the barn [illegible]
[illegible] no body but women and child-
ren, [illegible] the [illegible]
[illegible] had seen a carriage coming
up [illegible] were out
[illegible] the barn [illegible] half a dozen
[illegible], taking the
[illegible] near the barn. We got a lot of old
[illegible], under [illegible] the barn, all the
[illegible] and all that could be saved, and
the rest was left to burn. The little wind there was blew away from
[illegible] was no danger. The barn was of stone
with thick walls and there was no danger [illegible]
[illegible] on the windward side, but the neighbors, who came
[illegible] them [illegible]. After a while the Engine came
from [illegible] with a great number of boys and men, [illegible]
[illegible]. [illegible] again [illegible]
[illegible]
[illegible]

[illegible] Philadelphia, [illegible]

[illegible]

[illegible]

[illegible]

Very truly yours,
[illegible]

35 [illegible] St. Philadelphia, 8 June '60.

[illegible] Esq.,

Montgomery, Ala.

My dear Sir:

I must put off starting for a day longer again and will set out tomorrow night for Montgomery. I am waiting for a surveying instrument that I think it possible I may want while in Alabama, and it seems sure to be ready tomorrow. It was so nearly finished several days ago that it seemed rather foolish for me to leave it [illegible] though the delay keeps me much longer than expected.

Very truly yours,

Benj. Smith Lyman.

[illegible] Fifth Street, Philadelphia, 19 Jany. [illegible]

A. E[illegible] Esq.
Montgomery, Ala.

My dear Sir:

The instrument maker has not succeeded in finishing [illegible] fitted up, and, as it cannot readily get to be [illegible] by noon tomorrow, I will write [illegible] day [illegible] that for the [illegible], tomorrow evening. [illegible] by [illegible] night (of the [illegible]) [illegible] will leave [illegible] for [illegible] [illegible] sent to Wright. Trusting that these delays are not troublesome to you (as indeed your last two letters would seem to show) I remain

Very truly yours,

Benj: Fra[illegible]

Montgomery [illegible] 14 June 1859

[illegible]

[illegible] Street, [illegible]

My dear [illegible]

[illegible] by you [illegible]

[illegible] before embarking [illegible]

[illegible]

[illegible] that [illegible] have [illegible]

[illegible] thought high [illegible]

[illegible]

Very [illegible] yours,

[illegible]

[illegible], Mo.; 14 June 1839.

Messrs [illegible] Gray [illegible]

[illegible] Philadelphia.

Gentlemen

[illegible] of that

[illegible] your estimate of the cost

of [illegible] instrument [illegible] price I might act upon

[illegible], including [illegible]

[illegible] and the [illegible]. Also the cost [illegible]

new instrument of the same kind but with the [illegible]

[illegible] that have [illegible]

[illegible] in that for [illegible]

[illegible] this [illegible] with such a new and

[illegible] any chance should offer to

[illegible] of this.

[illegible] address me here as soon as convenient, [illegible]

a day [illegible] after getting this, and oblige

Yours very truly,

Benj. [illegible]

Care of A. Edwards Esq.

[illegible] Post Office

[illegible]

[illegible]

[illegible]

[illegible] He is [illegible] [illegible]

[illegible] as a good fellow [illegible]

[illegible] with him here, and [illegible]

[illegible] years ago [illegible]

[illegible] Col. [illegible] been moving [illegible]

[illegible] [illegible]

[illegible]

[illegible] for [illegible]

[illegible] Country [illegible]

[illegible] and it is a wonder [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] we have [illegible]

[illegible]

[illegible] good roads. [illegible] Col.

[illegible]

and formerly [illegible] U. S. [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

from the [illegible]; and I am confident that you are capable of holding your place successfully and that you will do so [illegible] as the work comes to you. As for your being fitted more for mining, you may have been so [illegible] when you first arrived at [illegible]; but you [illegible] [illegible] Germany fitted you much better for [illegible] than you are for any mining work [illegible] also fitted you much better for mining [illegible] than you were before. ~~[illegible]~~ very much the mechanical experience you have and there will come in play one way or another in the [illegible] of a mine; and [illegible] and [illegible] [illegible] not a great many steps below the mines [illegible] in regard to activity and general [illegible] [illegible] in a managing one but will teach [illegible] [illegible]. Still, it is nothing very unusual or [illegible] that a man should [illegible] would be better [illegible] position [illegible]; I only hope you will not [illegible] until you get too old [illegible], if at all. If you could not become attached to [illegible] working I think it would be far better for you than mining would.

[illegible] before [illegible] to California as [illegible] Hay [illegible] geologic [illegible] gives him transportation and [illegible] this year. [illegible] of those Pacific [illegible], and may lead to something that will pay. There seems to be nothing else for him to do at present. — [illegible] after you [illegible] — I came [illegible] from Phila[illegible] by way of [illegible] Atlanta and have bought the piece of land [illegible] [illegible] you come again this [illegible]
[illegible]

[illegible] Philadelphia [illegible]

[illegible]

[illegible]

My dear [illegible]

If any letters [illegible] come for me [illegible], please [illegible] them [illegible] it is possible that some have come, as I find [illegible] [illegible]

I found there was no [illegible] [illegible] the [illegible] with the [illegible], and [illegible] [illegible] I [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] and is [illegible] [illegible] [illegible] [illegible] not yet been brought here [illegible] Railroad [illegible]; but hope [illegible] [illegible] within a very few days.

Give my [illegible] regards to [illegible] and the rest of your family. [illegible] [illegible] [illegible] and [illegible] this evening.

Very truly yours,

[illegible]

[illegible]

[illegible]

[illegible]

My dear Sir,

Left home yesterday from my [illegible] to [illegible] but [illegible] in regard to the [illegible] [illegible] to [illegible] [illegible] [illegible]

[illegible]

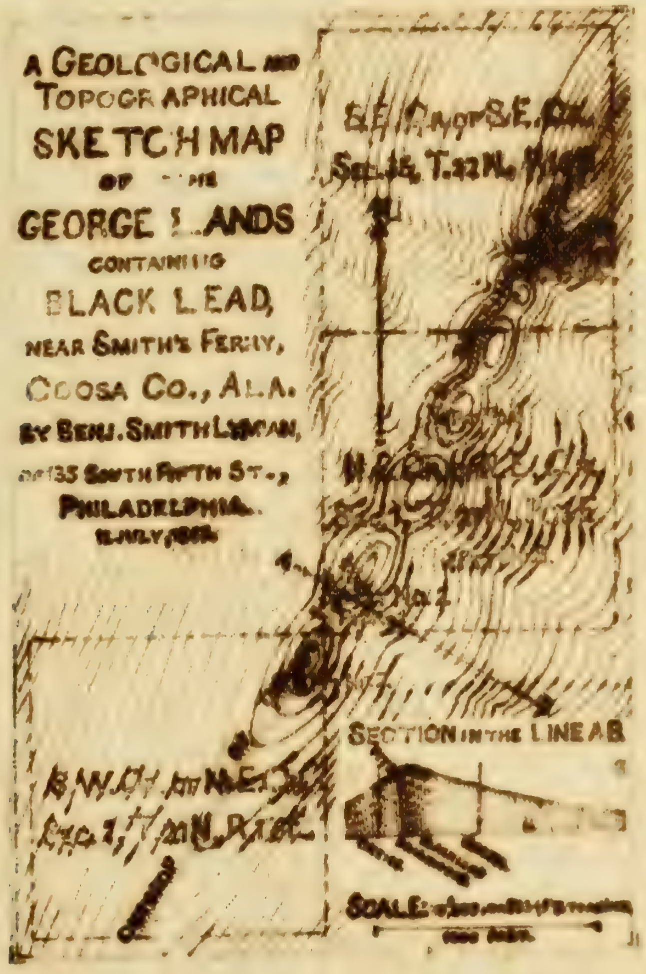
[illegible] and [illegible] One [illegible] [illegible] [illegible] and [illegible] [illegible] [illegible] 3 00 [illegible] 5 [illegible] 6000 [illegible] [illegible] dollars [illegible] The furnace is 39 feet [illegible] [illegible] building [illegible] and the coal fields are [illegible] miles [illegible] [illegible] mineral lands [illegible] dollars an acre [illegible] [illegible] an acre [illegible] [illegible] land, [illegible] mineral lands [illegible] is now subject to entry [illegible] [illegible] [illegible] [illegible]

[illegible]

[illegible] Germans [illegible] Switzerland. I feel [illegible] so much [illegible] good [illegible]

[illegible] Your affectionate Son. Benj. Smith [illegible]

Report of an Inspection of the Black Lead Mine [illegible] [illegible] of the [illegible] Lands of [illegible] [illegible] [illegible] the North East [illegible] of Section [illegible], Township [illegible] Coosa County, Alabama, by [illegible].



Situation. The George lands bearing black lead, in Coosa County, Alabama, lie on the [illegible] side of the Coosa River [illegible]

south forty and just south of [illegible] near its mouth. They are the southeast quarter of the southeast quarter of Section 30, Township 22 North, Range 17 East, and the northeast and southeast quarters of the northeast quarter of Section 1, Township 21 North, Range 16 East; making in all 120 acres. The second mentioned of these forty acre tracts lies just south of the first and next to it; and just northeast of the third and touching it by one corner. It is all wild land.

Lay of the land. A high hill or ridge [illegible] runs through all three tracts in a course about North 30° East. This ridge slopes down steeply on either side, towards the northwest to a depth of about 500 feet, and on the southeast about 200 feet.

Geology. The rocks of the mountain do not, so far as I have seen, dip all very steeply, say 80°, to the southeast; but it is not at all unlikely that there may be a saddle in the rocks so sharp that both sides of it seem to have the same dip.

The rocks seem to be all quartzite or similar to it in character, with some variations in composition, in some places for example a talcose schist, in other perhaps a mica schist, in others a quartzite, or [illegible]

[illegible] in some pl[illegible] as a sort of [illegible] of [illegible] position.

[illegible] black [illegible] [illegible] is found [illegible] [illegible] [illegible] together. [illegible] in the back [illegible] [illegible] and [illegible] [illegible] the [illegible] [illegible] [illegible] [illegible] [illegible] with the [illegible] [illegible] [illegible] [illegible] [illegible] as well as [illegible] [illegible].

[illegible] [illegible] [illegible] the northeast corner of the [illegible] [illegible] [illegible] [illegible] of [illegible] feet [illegible] and [illegible] feet [illegible]. The black band is [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] feet and a half [illegible] [illegible] [illegible] [illegible] [illegible] from each other by [illegible] feet and a half of broken rock. The dip [illegible] [illegible] [illegible] [illegible].

The next opening to the north are Pit No. 1 and Pit No. 2 [illegible] [illegible] [illegible] the northeast corner of the [illegible] [illegible] [illegible]. Pit No. 1 is a [illegible] smaller [illegible] [illegible] and [illegible] only a part of the same [illegible] as No. 2 [illegible] [illegible] [illegible]. Pit No. 2 is a large hole [illegible] thirty feet [illegible]

11

[illegible] height [illegible] feet wide, and at the [illegible] [illegible]. At the [illegible] [illegible] [illegible] bed of rock [illegible] is [illegible] [illegible] [illegible] through the upper [illegible] of [illegible] [illegible], [illegible] [illegible] through [illegible] a small [illegible] Pl. [illegible] [illegible] [illegible] [illegible] with [illegible] [illegible] Below this [illegible] [illegible] [illegible] [illegible] feet [illegible], containing a large [illegible] [illegible] but many [illegible] [illegible] [illegible] [illegible] [illegible] bed. Below [illegible] bed [illegible] feet and a half [illegible] [illegible] stone [illegible] [illegible] with [illegible] [illegible] and [illegible] [illegible] in some parts [illegible] with [illegible] [illegible]. [illegible] below that [illegible] [illegible] [illegible] [illegible] feet thick [illegible] [illegible] bed of [illegible] rock [illegible] [illegible] bearing [illegible] [illegible] [illegible] [illegible] [illegible] at the eastern end of the hole. There [illegible] bed of [illegible] [illegible] [illegible] [illegible].

The next opening [illegible] [illegible] Pl. No. [illegible] [illegible] [illegible] the middle of the [illegible] hole [illegible] [illegible]

5

[illegible]

[illegible] which [illegible], as if there were [illegible] this and the [illegible] [illegible] down the hole [illegible] to be nearly vertical. Among the [illegible] [illegible] with [illegible] [illegible]

[illegible] [illegible] P. [illegible] [illegible]

[illegible] five yards from the [illegible] and is a [illegible] [illegible]

[illegible] towards the bottom of the [illegible] [illegible] in the [illegible] [illegible] seems to be [illegible] about as thick [illegible] [illegible] ~~as they are~~ at the other places but [illegible]. The thickness of the bed [illegible]

and cannot be measured here, but would seem to be over five feet at least. Pit No. 4 is just above Pit No. 3 higher up the same hillside in a line with the course of the drift; and is a hole about ten feet long east and west, by five feet wide and say 8 or 10 feet deep. The same rock with black lead is to be seen as in Pit No. 5, but is poorly uncovered.

All the foregoing openings would seem to be upon the same bed or pair of beds lying near together. If they be not the same beds, nearly conformable in dip with the latter or, they may be beds that lie [illegible] in continuation of each other but perhaps striking off in either direction somewhat [illegible]. In either case the [illegible] of good ore would be [illegible] the same.

Besides these there is a very small opening, Pit No. [illegible] a few rods east of Pit No. 1 which showed [illegible], some crumbled, some rusty rock with a little black lead in it, but less than is to be seen in the other pits. It would seem to be a small pit [illegible] above the other; and there may be a number [illegible] like it that have never been opened.

No. 8 is a drift or cut that was begun in the

[illegible] east of Pt. No. 2 in order to strike the [illegible] [illegible] level; but was abandoned when not [illegible] [illegible] yards in.

Quantity of Rock still Unworked. The beds that have been blocked out seem to run in all about [illegible] hundred [illegible] through the Rocks, and to have [illegible], at least one hundred yards [illegible] average level [illegible]. If then, the thickness of the two main beds together be taken on the [illegible] three yards and a half as observed [illegible] the whole amount of rock [illegible] would be (1400 x 100 x 3½ =) [illegible] in cubic yards, or say a million tons. This is of course only a very rough estimate as [illegible] we [illegible] more thoroughly [illegible] thickness [illegible] from what is above [illegible].

Richness of the Beds. In order to test the richness of the [illegible] been blocked samples that seemed [illegible] averages of the beds were taken wherever [illegible] [illegible] one of the [illegible] and [illegible] rich as any of these averages [illegible]. The richest looking samples of

8

[illegible] averaging were taken from [illegible] [illegible] No. 6 but these were not [illegible] average samples. [illegible] with [illegible] [illegible], those from the [illegible] end of Pit No. 2 and those from Pit No. 6, have been [illegible] by [illegible] [illegible] good and [illegible] [illegible]. It found

		Dry Sample from Pit No. 2.	Warm Sample from Pit No. 6.
[illegible] the working [illegible]		74 %	64 %
[illegible]		5 "	16 "
Impure	Silica	10 "	8 "
of the Lead	Phosphate lead	10 "	8 + } 16
[illegible] and loss in washing process		1 "	4 "
		100 "	100 "

It is [illegible] [illegible] that the sample from Pit No. 6 although in its [illegible] state it [illegible] the [illegible] was really no richer than the other [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] and [illegible] [illegible] [illegible] more than [illegible] per cent of [illegible] lead. Dr. Koenig followed my [illegible] [illegible] in making use of the washing process [illegible] [illegible] the working on a large scale, and in only [illegible] [illegible] [illegible] the [illegible] of the impure [illegible] lead of Pit No. 6.

[illegible] the [illegible] sample [illegible] fair
[illegible] of the [illegible] in Pit No. 7 was [illegible] by [illegible]
[illegible] and found to contain only [illegible]
[illegible] per cent. of black lead. This [illegible]
[illegible] was [illegible] in [illegible], and likewise contained [illegible]
[illegible] by Dr. Koenig [illegible] [illegible]
[illegible] hardly [illegible]
[illegible] of the two others.

[illegible]. Taking the yield of ten per cent.
[illegible] average [illegible] about [illegible]
[illegible] thirty [illegible] of [illegible] would give
[illegible] of black lead, which [illegible] present [illegible]
[illegible] would be worth about thirty [illegible]
[illegible] producing it would be [illegible] of mining
and washing and [illegible] it [illegible].
[illegible] would [illegible] easily [illegible]
[illegible] and in some parts very [illegible]
[illegible] [illegible] in the [illegible]
[illegible] such that adits or drains
[illegible] could be easily driven [illegible]
[illegible] three hundred feet [illegible]
[illegible] of the beds. The crushing and washing
would not be very costly, because the [illegible]

is soft as to crush easily, and small streams are so clear that water for washing could easily be [illegible]. Still even these operations would be more costly in Lebanon than in countries where mining has long been widely carried on with success, and where there is a large number of men well trained in such work.

The greatest expense, however, would be the separation of the iron; and this would be quite necessary. The black lead assayed from Pit No. 2 was far more free from iron than samples from elsewhere [illegible]; and it is quite sure that the [illegible] proportion of iron left in the washed, impure black lead would average as much as the black lead [illegible]. To separate this by hydrochloric acid, the simplest way, would cost of itself just about the value of a pure black lead. Other cheaper ways of separating the iron might be devised; such as heating below red heat after mixing the powdered rock with a certain amount of charcoal, so as to deoxydize the iron and then washing it out or dissolving it in cheap sulphuric acid. But it would probably need a year or two of experimenting, and a rather costly establishment, before

11

such a process could be successfully carried out in [illegible]. In Alabama the difficulties would be [illegible] greatly increased by the lack of any number of men skilled in such mechanical or [illegible] work. In a country where skilled [illegible] and [illegible] is [illegible] cheap, it would perhaps be quite possible to work with profit even large [illegible] deposits; but everything is so different in Alabama that it seems clearly quite unwise [illegible] the trial.

Benj. Smith Lyman.

[illegible] Street, Philadelphia,
[illegible] 187[illegible]

[illegible]

[illegible] wrong.

I have had no chance yet to examine the [illegible]

[illegible]

[illegible] of the [illegible] [illegible] [illegible] mixed with the [illegible] of [illegible], [illegible] [illegible]
[illegible] the ore was [illegible] roasted before putting into the furnace, and [illegible]
[illegible]. From the building of the furnace in [illegible] until [illegible] charcoal was
used in the furnace [illegible] until [illegible] coke was used; and between [illegible] and
the final abandonment of the furnace at the breaking out of the Rebellion [illegible]
[illegible] was used. It is said that with charcoal for fuel the iron was
cold short, and that it is not very cold short when with anthracite for fuel.

The nature of the ore is to be seen more fully from the following
analyses [illegible] made by Dr. [illegible] of Philadelphia, a
[illegible] chemist. These samples were taken from the
[illegible] part of the Big Bar [illegible] and [illegible] to be fair average
[illegible] [illegible] and [illegible] that had been [illegible] for the
[illegible] [illegible] [illegible] [illegible] on this ore,
[illegible] [illegible] [illegible]. Allowing [illegible] that with the [illegible]
[illegible] [illegible] [illegible] [illegible] the weather [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]; but the samples were taken from [illegible]
[illegible] [illegible] [illegible] from the [illegible]
[illegible] [illegible] and [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible], and [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible], and [illegible]
[illegible] [illegible] at all.

Signed by Dr. [illegible]

		[illegible]	[illegible]	10 Or.
[illegible]		10.50		56.7
[illegible]			39.[illegible]	
[illegible]		2.52		[illegible]
[illegible]		0.35		[illegible]
[illegible]		10.01		[illegible]
[illegible]		[illegible]		[illegible]
[illegible]		[illegible]		[illegible]
[illegible]	[illegible]		[illegible]	
[illegible]		0.2[illegible]		[illegible]
[illegible]	[illegible]			
[illegible]		[illegible]		[illegible]
[illegible]				[illegible]

[illegible]

[illegible] of [illegible] of lime [illegible]

[illegible] $\frac{1}{2}$ per cent. of the [illegible] in the [illegible] per cent. in the [illegible]

The phosphorus, though very likely combined with the lime, is [illegible]

[illegible] that it [illegible] need [illegible] to make iron the [illegible] [illegible] and with the [illegible] [illegible] possi- [illegible] of the phosphorus might be [illegible] by [illegible] [illegible] it is possible to make the iron gray; but the [illegible] [illegible] the greater length of time needed for pud- dling or refining the phosphorus may better be got rid of.

The silicon [illegible] intimately mixed throughout the [illegible] especially the [illegible] to make the iron silicious, but may be made [illegible] by using a low temperature [illegible] of making [illegible] or by using a good amount of lime as a flux, so as to [illegible] in which the silica is less easily reduced; or by adding a flux [illegible] that contains manganese, which tends to carry away the silicon from the iron.

[illegible] of the hard [illegible] of the [illegible] [illegible] and [illegible] [illegible] and also lessen the heat needed for [illegible] [illegible] the amount of heat.

[illegible] that both the silicon and the phosphorus are [illegible] undesirable [illegible] to better quality that [illegible] coke and anthracite; [illegible] making [illegible] it [illegible] of the fluidity [illegible] the iron [illegible] makes the iron take a very sharp impression from a mould [illegible] tal casting [illegible]

[illegible]

Messrs. Witte and Hughes

[illegible] Mining Engineer,

[illegible] To Report on [illegible]

[illegible]

N° 50.

[illegible]

[illegible]

[illegible] Philadelphia, [illegible]

[illegible] Esq.

[illegible] N. Y.

[illegible] Sir

I have [illegible] my instrument [illegible] [illegible] value of my [illegible] [illegible]

The instrument is of [illegible] [illegible]. The horizontal [illegible] plate is [illegible] [illegible] [illegible]. The [illegible] long. The [illegible] single minute [illegible] [illegible] [illegible] made in [illegible], 1834, and [illegible] [illegible] [illegible] [illegible] [illegible] for measuring distances with a [illegible]. The makers think the instrument would if new be worth [illegible] without them, and with them about two hundred and [illegible] dollars, [illegible]. They think also that it would [illegible] one third of its first value, making [illegible] of one hundred and forty dollars in its present state.

Very truly yours,

Benj. Smith Lyman.

135 South [illegible] Street, Philadelphia, 18 [illegible]

[illegible]

[illegible] favor of last Wednesday came duly [illegible] and [illegible] me with its account of your [illegible] and [illegible]; [illegible] account of John Clarke's curious [illegible] he did [illegible] his nieces though he [illegible] by him! It is a pity he did no more for [illegible] children, especially the estimable Totty. — I am very [illegible] that [illegible] eyes do not decidedly improve; it seems as if [illegible] could be absorbed, so that it would not be [illegible] no idea it would take so long. I wish the [illegible] Dr. [illegible], in whom I have [illegible] as a [illegible] learned and skilful oculist, although [illegible] Dr. Williams may be [illegible] I know nothing about him. — I am glad to hear of John's success in [illegible] his examination; and of the pleasure you [illegible] of [illegible]

I went to [illegible] as planned the day after I wrote last [illegible] from home six days. I found there Mr. and [illegible] who had arrived [illegible] of the fifth. Of the ladies of the household [illegible] have been asked to spend the [illegible] there. [illegible] owing to work that [illegible] on the ceilings and walls in stopping up cracks [illegible]. [illegible] days before I came away half a dozen [illegible] the [illegible] and [illegible] painting [illegible] library [illegible] were [illegible] altogether from [illegible] and [illegible] warmed [illegible] for the [illegible] Miss Kitty [illegible] was there but making a visit; had been [illegible] days long. The family [illegible] and the children [illegible], and I was very glad [illegible] acquaintance with them so agreeably. The two younger [illegible] never seen before and it was a great pleasure [illegible] of practice in French and [illegible]

[illegible] much [illegible] a little [illegible] it is more [illegible] than English, and [illegible], who [illegible] did not [illegible] seem so attractive to me as young [illegible] perhaps because she was not so very young and seemed to have rather less than usual of the [illegible] perhaps because she did not come to [illegible] money to [illegible] [illegible] Francis [illegible], the [illegible] would [illegible] [illegible] would talk nothing but [illegible] [illegible]. She would [illegible] quite amusingly and tell stories [illegible] in Germany. She talked [illegible] as [illegible] [illegible] talked [illegible], for she had always lived in [illegible] families. She says [illegible] and that eight years ago about the time I was in Germany she lived with an old bachelor [illegible] from [illegible] daughters I used to dance with. She knew them [illegible] and said they were the heirs of this bachelor uncle [illegible]. She had also lived in the family of a [illegible] [illegible], who was sixty six years old and [illegible] [illegible] because he was in love with [illegible]. There is also at Algona a man with [illegible] [illegible] who came from [illegible] near Dresden. The [illegible] [illegible] very much. [illegible] was very much excited at the [illegible] the firing of crackers, and he had a [illegible] [illegible] father also gave him [illegible] a hatchet, [illegible] [illegible] [illegible] great delight. He is a fine fellow [illegible] probably [illegible]. [illegible] [illegible] before [illegible] while he was [illegible] [illegible] slight attacks [illegible] [illegible] and Miss [illegible] are two members of the family that I had [illegible] never seen before. [illegible] [illegible] and went away the day before [illegible]. [illegible] [illegible] the first time I had seen them in eight years. The [illegible] the eldest daughter [illegible] in Paris, was [illegible] one and [illegible] the entertaining for all; for her father is [illegible] [illegible] [illegible] I am [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] what is the [illegible]

[illegible] Algona [illegible] [illegible]

[illegible], Philadelphia, [illegible] 1849 [?].

[illegible]
[illegible] [illegible]

[illegible]

I send you herewith a pamphlet on the [illegible] [illegible], thinking that it may come in your line [illegible] [illegible] [illegible]. [illegible] who has the [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] the pamphlet and [illegible] much [illegible] [illegible] [illegible] [illegible] and [illegible] grounds. When you come [illegible] [illegible] [illegible] be [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] made [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] and [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] here.

[illegible] [illegible] calling your attention to this matter may lead to [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible].

Very truly yours,

Benj. Smith Lyman.

[illegible]

Dear [Sister]:

I feel bound to [illegible] you [illegible] [illegible] [illegible] [illegible] to you & [illegible] for their [illegible] [illegible]. This comes by [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] them [illegible] [illegible] them this [illegible] through the [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible], [illegible] [illegible] you [illegible] [illegible] [illegible]. I thought it quite possible you would [illegible] yourself of this [illegible] to become better acquainted with [illegible] and perhaps [illegible] [illegible] [illegible] [illegible] you [illegible] so [illegible]. If you could do so you would not only [illegible] me very much, but would be repaid I think in the pleasure you would find in knowing them better. They may seem a little [illegible] and [illegible] at first, but they will [illegible] [illegible] [illegible] [illegible] in your ~~[ill]~~ absence and prove very agreeable.

The [illegible] [illegible] [illegible] them [illegible] [illegible] morning [illegible] getting a place for them [illegible] [illegible] [illegible], and [illegible] [illegible] [illegible] they [illegible] seemed to [illegible] [illegible], for they [illegible] [illegible] [illegible] by [illegible] [illegible] [illegible] [illegible].

Please give my love to [illegible]

Yours affectionately

[illegible]

[illegible] Philadelphia, 24 [illegible] 18[illegible]

A. [illegible] Esq.

Montgomery Ala.

Sir:

[illegible] of the [illegible] tenth is at hand. I send you [illegible] sample [illegible] black [illegible] of the [illegible] taken from [illegible] as left [illegible] and [illegible] with [illegible] and [illegible] thus [illegible] porches of the [illegible].

I find [illegible] the [illegible] of your former [illegible] confi[illegible] in [illegible] and in the chri[illegible] [illegible] I think [illegible] impossible [illegible] George [illegible] the [illegible] sample; and [illegible] have been taken [illegible] had a [illegible] of the [illegible] that [illegible] for [illegible] had it [illegible].

[illegible] found [illegible] by no [illegible] pretty good [illegible] widely [illegible] points [illegible] had [illegible]

[illegible]

[illegible] Philadelphia, [illegible]

[illegible] Esq.,
[illegible]

Dear Sir:

In making some inquiries [illegible] for you [illegible] the price of a stamping mill and was [illegible] for two thousand dollars, and could [illegible] much more with an [illegible] the [illegible]. I send herewith circular of the Wilson Patent Steam Stamping Mill [illegible] machine, though a rather new one. It is [illegible] the Cumberland [illegible]. [illegible] in twenty four hours thirty four tons [illegible] an average of [illegible] and [illegible] in 24 hours [illegible] fine as to pass through a screen of thirty nine meshes to the inch.

Besides [illegible] to other crushing and [illegible] machinery [illegible] recommend your doing it through my particular friend Mr. A. [illegible] Harper of No. 324 Walnut Street, Philadelphia.

Very truly yours,

Benj. Smith Lyman.

[illegible]

[illegible]

[illegible] Mr. [illegible] working with [illegible]

[illegible] Mr. Pinkney is [illegible] likely to [illegible]

[illegible] going away for the summer. [illegible] for several weeks [illegible]

[illegible]

Since writing the foregoing I have been [illegible] this evening and [illegible]. He says the note is [illegible] from the [illegible] until [illegible] or no meeting [illegible] at the [illegible] next Spring. Mr. [illegible] was at the meeting this evening [illegible] until September [illegible]. — I have also this evening [illegible] before the [illegible] every instrument [illegible] still [illegible] and the [illegible] is so satisfied [illegible] that [illegible] [illegible] for [illegible] [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

141

138 South [illegible] Street, Philadelphia, [illegible] Aug. 18[illegible].

Warren Delano Esq.
No. 55 Broadway, New York.

My dear Sir:

Your favor of the thirtieth of last month came duly to hand yesterday morning enclosing a check for two hundred and thirty dollars to pay for the surveying instruments you wished me to buy and send to Mr. White of the [illegible] Mining Company. I bought the instruments according to your list and had them sent to the express yesterday evening, except the level rod, [illegible] for Young's pattern, which cannot be ready until tomorrow and [illegible] sent straight on. The steam gauge was also paid for and sent [illegible] the drawing instruments [illegible] the transit and the tripod. [illegible] [illegible] of the [illegible] from the list the protractor [illegible] silver with [illegible] [illegible] as it would not at all take the place (as you supposed) in putting it [illegible] of the protractor with [illegible] blade and [illegible] [illegible] on a square drawing board, called in the trade "a T square [illegible] board and protractor". This last has [illegible] for paper, [illegible] [illegible] and would cost [illegible] five dollars or more, and could be [illegible] either at Queen's or [illegible]. [illegible] adds [illegible] the straight edge of [illegible] [illegible]. The drawing [illegible] are all packed [illegible] with the steam gauge and tripod [illegible] [illegible] by him, and the transit and tripod by Young. [illegible] as follows:

1 Horn Protractor (No. 204 of [illegible] catalogue)	1,25
1 [illegible] Scale " 228	2,00
1 Steel Straightedge " 307 (36 ins.)	7,50
1 German Silver [illegible] " 315	2,25
12 yds (½ roll) Tracing Muslin, 40 in. wide,	11,50
10 " " " [illegible] paper, Muslin back, 40 in.	11,00
10 " Profile Paper, Plate B.	3,00
10 [illegible] Cross Section Paper	2,50
1 [illegible]	1,00
½ doz. [illegible] Pencils	,50
1 Cake [illegible] ink	,25
2 doz. [illegible], No. 157	,30
amount [illegible]	[illegible]

Queen's bill, brought forward	$43,55
Steam gauge and siphon	10,50
Transit	140,00
Level rod	16,00
Boxes for packing level rod	,40
	$210,45
Broker's fee for cashing $1.00 [illegible]	,25
	210,70
Balance in my hands	19,30
	$230,00

Hoping that this may prove wholly satisfactory, and that the instruments may all reach their destination in good order, and holding the balance against you coming this week, unless you advise otherwise, I remain

Very truly yours,

Benj. Smith Lyman.

135 South Fifth Street, Philadelphia;
1 Aug. 1849.

A. Holmes Esq.
No. 55 Broadway, New York.

My dear Sir:

Your favor of the thirtieth of July, enclosing two checks amounting to eleven hundred dollars, came safely to hand yesterday morning, with its instructions to pay off the judgement against the Union Car Company.

The reason why the attorney refuses to mark the judgement to your brother's use, as you wish, is that both Mr. Power and Mr. Cummings, for Mr. Parkhurst, will not consent to that arrangement, and it is the attorney's habit never to do so without the consent of all the parties interested. Mr. Power even after getting your letter absolutely refused his consent, and so does Mr. Cummings. Mr. Power did not call at Thomas's for his letter until I had looked him up at the [illegible] House, and so did not get it until about half past eleven. Pauley and I had already been to the office of the attorney holding the judgement (Mr. Ashmead) and in his absence from town had agreed to meet his representative there, Mr. Montgomery, at twelve o'clock, as Montgomery wished to leave town at half past twelve to spend Sunday. On our all meeting there at twelve (not Cummings, of course) Mr. Power repeated again and again, that he had already offered me to pay his half of the judgement and costs; and this seemed to me decidedly better than your paying it for him, seeing that you cannot have the judgement marked to your use. On consulting with Pauley he agreed with me, and we were for carrying out the arrangement right away; but Power thought the settling up of the business would take much more time than Montgomery had left at his disposal yesterday morning, and so the whole matter was put off until tomorrow morning at half-past nine, when all promised to be there punctually again. Pauley says the company will not become liable in any way to any claim from Power for the non-payment the makes of his share; so that it does not seem possible to [illegible] any harm to the company or you that he should pay his share right away. We expect him to make out his check to Montgomery and send to you, for Montgomery says he will take it. Montgomery also refused to mark the judgement to anybody's use unless the full amount were paid to. The judgement was in amount 709 dollars or so. The costs will be about [illegible] hundred dollars in all.

Very truly yours. Benj'n Frank'n [illegible].

13 South Fifth Street, Philadelphia;
1 Aug. 1849.

A. Nelson Esq. No. 57 Broadway, New York.

My dear Sir:

Your favor of the thirtieth of July, enclosing two checks amounting to three hundred dollars, came safely to hand yesterday morning, with the information of the entry of the judgment against the [illegible] Company.

The reason why the addition of interest [illegible] the judgment [illegible]

[illegible]

35 South Fifth Street, Philadelphia, 1 Aug. 18[illegible]

Dear Father:

Your kind favor of the thirtieth came to hand yesterday. I am afraid that I have raised much too high anticipations of the pecuniary profit I am likely to derive from my invention of the new surveying instrument. There is a general impression among folks not especially conversant with the matter that immense fortunes are frequently made by patents [illegible] engineers who have more ideas to do with [illegible] [illegible] that [illegible] nine hundred and ninety [illegible] [illegible] thousand are worthless and that scarcely one out of [illegible] them prove to be of any important pecuniary [illegible] to the inventor or anybody else. It is not [illegible] [illegible] worth while to try to form any great [illegible] [illegible] [illegible] nothing [illegible] very much [illegible] upon an invention. The only invention, therefore, that I am willing to give much time and care to is one that I have [illegible] upon for some years and that ~~and~~ would be [illegible] [illegible] mining or small geologist or mining engineer. [illegible] for surveying instrument is one of the [illegible] in that [illegible] [illegible] [illegible] I [illegible] [illegible] [illegible] the instrument maker recommends patenting it [illegible] and if the patent should repay me the cost of getting [illegible] instrument made for my own use I should be glad; but [illegible] that beyond that and the little glory the instrument [illegible] I shall have no very great reward from it.

I think of trying [persuade] the instrument maker to make me an instrument and bear the expense of taking out a patent in return for a share of the patent right, say one half. In order to get a patent it will be necessary to deposit a working model at the patent office, which will of itself be a matter of some expense besides the fees of the office. I [illegible] aware of the practice and method of getting a caveat. [illegible] very likely not be necessary for this instrument [illegible] very likely to be [illegible] by anybody else [illegible].

[illegible], no doubt, [illegible] maker for many [illegible] that [illegible] away [illegible] him with his experience in [illegible]. It would require a [illegible] deal of trouble for one to [illegible].

Mr. Lesley had not got home yesterday morning from Milton [illegible] that he should come [illegible] evening and that Mrs. [illegible] was not well. He wrote me last evening that he was [illegible] well as well as Mary, and that Maggy was at [illegible], but would return on Thursday last and that Mary would then go [illegible]. He said that Uncle Joe was in usual health, [illegible] and [illegible] was [illegible] from his head; and [illegible] had got home and [illegible] expected at [illegible]; and [illegible] was there too. He [illegible] and Aunt Susan were [illegible] to Milton next day, and [illegible] had already gone there.

Mr. Delano was here on Thursday, and said he had left all as well as usual at Algonac, and since leaving [illegible] on Monday he had seen Aunt Kitty the next day at [illegible] Franklin at Rhinebeck on his [illegible] birthday. It [illegible] that Mr. Delano will be here again next [illegible] likely. The Car company's affairs drag along still without much change. I fancy that Mr. Delano has dropped the idea of making me Secretary of the Company; and it is very likely that the place would not be a desirable one even if I could well [illegible]. Meantime there are a number of little things connected with the company [illegible] for Mr. Delano now and then, and so I [illegible] am getting acquainted with the state of its affairs, but am learning a little about the way business is done.

Please give my love to all.

Your affectionate Son.

Benj. Smith Lyman.

13 S. [illegible] Street, Philadelphia, [illegible]

My dear [illegible]:

Will you be so kind as to send me the [illegible] Definition of [illegible] [illegible] [illegible] of the [illegible] [illegible] [illegible] same reason [illegible] [illegible] in its [illegible] [illegible], although [illegible] is already [illegible] my table.

Since I wrote you from Montgomery, with some expressions I have [illegible] a little travelling tale. I set out for home that evening [illegible] [illegible], and got here in three days. After being here a day or two I set off for [illegible] [illegible] [illegible] miles below [illegible], [illegible] [illegible] [illegible]. Then after two or three days at [illegible] [illegible], to find the [illegible] very [illegible] [illegible] by the invitation of the husband [illegible] [illegible] before. After being there nearly a week [illegible] [illegible] home and [illegible] here [illegible]. [illegible] [illegible] [illegible] were [illegible] a [illegible] with the [illegible], so I [illegible] views of [illegible] [illegible] with [illegible].

I suppose you heard long ago what I did not hear of until a week or two [illegible] it happened, when I had got home from Pennsylvania, [illegible] the death of Mr. Randolph, your friend [illegible]. It was caused, they say, by a typhoid fever caught in some of his prison visits. About that time I went to the Annual Exhibition of the Academy of [illegible] here and was interested in seeing two

[illegible] is worthy of [illegible] the [illegible] away, [illegible] same [illegible] had [illegible] by [illegible]. [illegible] and [illegible] medicine. Against [illegible] about; [illegible] this mission in behalf of [illegible] humanity of A. S. [illegible], and of W. J. [illegible].

I read with much interest your botanic notices and other editorials in the Republican. Something was said I believe in the paper about Mr. Bowles going away for some weeks or months this summer, so I suppose your duties are if anything increased, and that you are just as overrun with work as ever.

With me business is rather dull again, as might be expected at this season; but I find some [illegible] in getting up my [illegible] instruments and in fixing my arrangements for my new method of [illegible] or of plotting in the field. There is also some [illegible] about to do in connection with that [illegible], but this is not paying work. Still it gives me some knowledge of business [illegible], which it is interesting to know something about and may prove useful.

I have within five weeks past discovered an interesting character in Charles Keller the young partner of my instrument maker Mr. [illegible], and a very good fellow; I have been cultivating his acquaintance. He can play [illegible] tricks. He learned them from an Englishman in his shop, who learned them from an English officer, who had got them from a juggler in India.

Please give my regards to your wife and family. Very affectionately yours,

[illegible]

135 South Fifth Street, Philadelphia, 2 Aug. 18[illegible]

[illegible] Esq.
[illegible] Broadway, New York.

My dear Sir:

[illegible] only just now this morning Mr. Pierce, Mr. Montgomery, Mr. [illegible] and myself [illegible] the settlement mentioned in [illegible] letter [illegible]. The judgment and costs were paid one half by [illegible] of the Company [illegible] me for yourself [illegible] [illegible] Mr. [illegible] Delano, in whose name at least one receipt is [illegible] [illegible] was signed. The receipts given to the [illegible] [illegible] the whole sum [illegible] [illegible] [illegible] [illegible] and that [illegible] paid his half [illegible] Delano paid the company's half. [illegible] receipt [illegible] at his office [illegible] mine, and [illegible] with [illegible] your [illegible] and [illegible] [illegible] copy of the receipt [illegible] you or my [illegible] [illegible]. Mr. Montgomery says he will [illegible] the [illegible] in any other [illegible] that may prove more satisfactory to us. [illegible] a very decent fellow, and [illegible] [illegible] in College. This settlement of the affair [illegible] letter of your instructions [illegible], but [illegible] [illegible] better [illegible] you authorized me to do, and [illegible], I [illegible] [illegible] you did not [illegible] [illegible] Pierce being willing to pay down on the spot. I shall be glad to hear that it is satisfactory to you. When Montgomery [illegible] we should [illegible] the [illegible] to take steps Saturday [illegible] [illegible] and these steps have already added [illegible] [illegible] expenses; but there will be no further addition except in [illegible] [illegible] of this month, and after that the [illegible] [illegible] will be added. Mr. Pierce [illegible] to be always ready to pay [illegible] [illegible] that it be done.

You sent me two checks amounting to $1100.00
The judgment & costs (see receipt) were taken $533.10
Brokers charge for cashing the check .25
533.35
Balance in my hands 566.65 $1100.00

Shall I send you the balance or try to arrange with [illegible] for [illegible]
R. C. Thomas [illegible] yesterday [illegible] you [illegible] Friday.
Very truly yours. [illegible]

Pierce is [illegible]

3 [illegible] Philadelphia [illegible]

[illegible]

[illegible]

[illegible]:

Your favor of [illegible] is at hand, and [illegible]

[illegible] tells me that the amount [illegible] is $692 [illegible] he reckons [illegible], although [illegible] higher price than [illegible] and indeed [illegible] from the point of [illegible], and [illegible] already increased by [illegible] as it depends [illegible] which are [illegible] and [illegible]. [illegible] the half of the whole [illegible]; indeed there would still be nearly ninety dollars left. [illegible] first of the month the [illegible] of the judgment [illegible]

I went to the Car works this afternoon to adjourn the meeting [illegible] and did so. About [illegible] came in, [illegible] that it was the time for [illegible] meeting. He said he [illegible] sent to the [illegible] his resignation as [illegible]; also that an order came yesterday from the [illegible] with Co. [illegible] freight cars; also that Mr. Prevost had promised to come [illegible] with the [illegible] the mill [illegible] with the engine and [illegible] mill for a term of three or five years [illegible]. Mr. [illegible] of stock for [illegible] thinks it worth. He said he was $285 [illegible] and [illegible]. He said nothing about his proposed trip to Bangor.

Very truly yours. Benj. Smith Lyman.

135 South Fifth Street, Philadelphia, 6 Aug. 1869.

C. L. White Esq.
Supt. New Boston Colliery, Schuylkill Co. Pa.

Dear Sir:

Your favor of yesterday is at hand. On inquiring at Queen's whether the drawing materials, tripod head and steam gauge were all packed in one package, I find that it did not get off by express on Saturday after all, but was sent on Monday. The level rod was also sent on Monday from Grennig's, and as that too had not come to hand at the time of your writing, they all probably reached you later in the day or else will do so today. The transit and tripod went by express on Saturday evening, and so arrived sooner than the rest. It has taken much longer than I expected for the things to reach your place. If they should not have come safely to hand before you get this, please let me know.

I take the liberty of sending you a paper of mine on measuring with the telescope, as you may be interested in seeing in it (on page 9) an account of some parts of the very transit just sent to you.

Yours truly,

Benj. Smith Lyman.

133 South Fifth Street, Philadelphia, 6 Aug. 1869.

C. L. White Esq.
Supt. [illegible] Colliery, Schuylkill Co. Pa.

Dear Sir:

Your favor of yesterday is at hand. On inquiring at Express office I find that the drawing materials, tripod head and steam gauge were all packed in one package, and that it did not get off by express on Saturday after all, but was sent on Monday. The level rod was also sent on Monday from Harrisburg, and as that too had not come to hand at the time of your writing, they all probably reached you later in the day, or else will do so today. The transit and tripod were sent by express on Saturday evening, and should have arrived sooner. It has taken much longer than I expected for the things to reach you there. If they should not have come to hand before you get this, please let me know.

I take the liberty of sending you a paper of mine on measuring with the telescope, as you may be interested in using it for [illegible] of an [illegible], [illegible] of the very transit first sent to you.

Yours truly,
Benj. Smith Lyman.

135 South Fifth Street, Philadelphia; 6 Aug. 1869.

Dear Mother:

Your favors of last Saturday and Sunday came duly to hand. Your account of the surprise, met in honor of Mother's birthday was quite interesting; and I was glad then that you had been able to see something of the Misses Lyman. You make particular mention of the comfort they found at the Mansion House, as if perhaps in answer to the regret I expressed that they should have to go there; but that regret was not based wholly upon any lack of comfort they might have there. I trust they will find the new hotel at Goshen all that could be desired. Their house here still stands in apparent good order and safety, at least it did so last Tuesday evening when I passed there. Still, we manage to have pretty big fires here now and then, as you have probably seen we did night before last. The fire then was only about half a mile south east of this place, and I went to see it. I was at Mrs. Palmer's that evening, and the alarm bells and the bright light in the sky, although some three miles from the fire, told us that it must be an uncommonly large one. On coming home about eleven I stepped on down to the fire, and found it really a very fine sight. It had been burning then more than four hours and did not yet show any signs of being got under. The flames were very high and hot amid the water seem-

135 South Eighth Street, Philadelphia, 6 Aug 1869

Dear [illegible]:

Your favors of last Saturday and Thursday came duly to hand. Your account of the [illegible] [illegible] of [illegible] [illegible] story was quite interesting and I was glad then that you had been able to see something of the [illegible]. You make particular mention of the comfort they found at the Mansion House, as if perhaps in answer to the regret I expressed that they should have gone there; but that regret was not based wholly upon any lack of comfort they might have there. I trust they will find the [illegible] at [illegible] all that could be desired. This house [illegible] still [illegible] in [illegible] good order and safety, as [illegible] did [illegible] [illegible] [illegible] burning [illegible] [illegible] [illegible]. [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible], [illegible] [illegible] [illegible] we did [illegible] [illegible] last. The fire then was only about half a mile north east of this place, and I went to see it. It was at [illegible] [illegible] [illegible], and the alarm bells and the bright light in the sky, although some three miles from the fire, told us that it must [illegible] an uncommonly large one. On coming home about eleven [illegible] [illegible] [illegible] [illegible] the fire, and found it really a very [illegible] sight. It had been burning then more than four hours and did not [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. The flames were very high and [illegible] [illegible] [illegible] [illegible]

not to have the least effect upon them, although poured on in many large streams. At one time I saw the whisky running through the streets in a broad stream covered with a blue flame; a delightful odor as of plum pudding with rum sauce pervaded the air. I saw a good many drunken men, but did not see what is said to have taken place, the breaking in of some of the whisky barrels by firemen and others and the dipping out of the delicious beverage by the hatful and drinking of the same; some of it is said to have been in these storehouses for twelve years. Imagine its fine quality. — I had a charming evening with Mrs. Palmer. She was expecting Mr. and Mrs. Wright home the next day from Stonington, and said he was much better. She said Mr. and Mrs. Hopper had gone to Chicago on some business of Mr. Hopper's and had got home after an absence of three weeks; that Mrs. [illegible] came back by Auburn and brought with her from there Mrs. Isabel Parrish. It is also said that Mr. [illegible] and his family and Miss Maria Hopper are to come home in October. It is said too that Mrs. Lucretia [illegible] shows somewhat the effects of her age (76?), at least is restrained by her children from travelling about so much as formerly. Mrs. Palmer extolled her character most highly after an acquaintance with her from early childhood. Mrs. Palmer said she should herself be away three on the twenty first of this month, I believe. — Mr. Lesley got back from Milton on [illegible], in improved health and good spirits; but he said that Aunt Susan was not very well. — The weather here is delightfully cool, but we had one day a few days ago that was quite hot.

Please give my love to all. Your affectionate Brother
Benj. Smith Lyman.

did not see the least effect of it. — Here, although formed in
many large streams. [illegible] in sight of the [illegible] crossing the
[illegible] in a broad stream, covered with the blue [illegible]
delightful vista of [illegible] with [illegible] [illegible]
the [illegible]. I have spent many [illegible] but [illegible]
what is said to have taken place, the [illegible] of the
[illegible] by [illegible] and [illegible] and the [illegible]
the delicious beverage of the [illegible] and drinking of the [illegible]
[illegible] of it is said to have been in these [illegible]
[illegible]. Imagine its [illegible]. — I had a charming evening
with Mr. Palmer. He was [illegible] Mr. and Mrs. Wright came to
[illegible] from [illegible], and said he was [illegible] letter. He
[illegible] Mr. and Mrs. Hopkins [illegible] as [illegible]
[illegible] Mr. Hopkins and [illegible] of [illegible]
[illegible] came back [illegible] and brought
with him from the [illegible] Mrs. [illegible]. [illegible] that
Mr. [illegible] and [illegible] and [illegible] Hopkins are
to come here in October. [illegible] Mr. [illegible]
[illegible] the effect of our age (78), at least is [illegible]
[illegible] children [illegible] travelling about so much as formerly. Mr.
Palmer [illegible] her, most highly [illegible] after an acquaintance with her
from early childhood. Mr. Palmer said [illegible]
[illegible] as the [illegible] of [illegible] Medicine. — Mr. [illegible]
[illegible] from [illegible] in very good health and good
spirits; but [illegible] said that [illegible] was not very well. — The
weather here is delightfully cool, but we had one day a [illegible]
[illegible] that was quite hot.

[illegible] Your affectionate Brother
[illegible]

135 South Fifth Street, Philadelphia; 6 Aug. 1859.

My dear Sanborn:

Your very welcome letter of the third came to hand yesterday. It would certainly give me great pleasure to accept your kind invitation to go on to the Agassiz picnic and visit you about that time or the time of the Salem meeting, and I am sensible your promise of your company at both of those gatherings is a great additional inducement or temptation towards going. I hardly think however that I will go to either, as there seems to be quite a possibility of my having some professional paying work to do if I stay here that I might lose if I should go. I took a little holiday two of a week at the Fourth of July and I should hardly feel easy in my mind if I took two or three weeks more now. I have no severe and long continued labor to wait for me, and on the other hand if I stay at home I shall perhaps be doing a little more of the work that properly occupies one than if I go pleasuring about the country. Still, I would go if I could advertise my surveying instrument at Salem; but it will not be possible to get it made in time; as the instrument maker has so many orders on hand that he cannot take it up right away. Meantime, a number of improvements in some of the details occur to me every day or two, so that nothing perhaps is lost in reality by the delay. I can bring the matter before the public any time through the Franklin Institute and its journal, and can also bring out in the same way my projects for lightening the labors of surveying and plotting, projects quite unconnected with this special instrument. I think I shall get a patent for the instrument, although I doubt whether it will pay very well. I also mean to print and stereotype a couple of small tables in aid of the easy way of plotting, but doubt whether they will be made use of by anybody but myself after all. Surveyors don't seem to be much more disposed to make things with a little than any other class of men. — My friend Mr. C. C. Brown of the Architectural Iron works of New York and lately elected president of that Car Company in West Philadelphia of which ... was here last Thursday at a Stockholders' meeting and I spent the night with him. He told me about some little tables for computing very quickly the weights of iron and steel in different shapes and sizes, tables whose use is extremely simple but he finds it impossible to persuade the men connected with the Archi-

153

18 South Eighth Street, Philadelphia; 6 Aug 1941

My dear Andrews:

Your very welcome letter of the third came this yesterday. It would certainly give me great pleasure to accept your kind invitation to go on the [illegible] picnic and visit you [illegible] at the time of the [illegible] meeting [illegible]

[illegible]

[illegible] works to raise them instead of more cumbersome ones that have been longer in use. He also described to me his plan for an adding machine, which he says is far better than your correspondent Webb's; although Webb's idea is taken from a part of his, through his having described it some time ago to a Philadelphian who gave the idea to Webb or Webb's patentee. This Mr. Gordon is a curious character and a very good fellow. Although mixed up with these manufacturing concerns and wholly occupied by such business through the week, he is on Sundays a preacher, either Universalist or Unitarian, and he is a born preacher or public speaker. In private he is a great talker, but an agreeable one and a good story teller, an excellent mimic. He was born at Salem, in Rockingham County, N. H. [illegible], and is distantly connected with my Exeter flame. He removed, however, from that region quite young to Boston, and some forty years ago to New York City. He was settled or lived at one time in Utica. He seems to have kept up some acquaintance with eastern New Hampshire by travelling [illegible] after he lived there. — This Car company has not yet fully reorganized its board of officers, and its works are still idle; what will be the final result of the delays and deliberations no one seems to know.

I read with much interest your letters from Dartmouth College in the morning Republican you [illegible] kind as to send. Your tribute to the fair sex is really quite glowing. May I some day have the good fortune to lay my eyes upon the lovely Mrs. Duncan. — I have also to thank you for another Republican letter to unacknowledged that came some weeks ago. — I am not sure either that I ever mentioned receiving several copies of the Report of the Board of State Charities, three for myself and several others addressed to different bodies [illegible]. With them came a note from the new secretary through his clerk. It gave me pleasure to distribute the copies, and the two spare ones I gave, as last year, to the Hoppers and Bella White. The report of the deaf and dumb school at Northampton came about the same time. Mr Butler here, the executor of John Clarke, told me the other day that a hasty examination of the Clarke's estate showed that there was some $800,000 worth of property, so that the deaf and dumb school would have to wait only five or six years for its $200,000.

Please give my regards to your wife and family, if either are with you, and believe me ever very affectionately yours, Benj: Smith Lyman.

[illegible]

Th: Jefferson

135 South Fifth Street, Philadelphia; 7 Aug. 18[illegible]

W. H. Ogden Esq.
[illegible] Broadway, N. York.

My dear Sir:

Your favor of yesterday is at hand. Mr. White wrote me also that the tripod head and drawing materials had not come to hand. On inquiring at Queen's where they were all packed together in one package it turned out that it had not been sent to the express until Monday, instead of Saturday as they had hoped. The transit and tripod were sent on Saturday; and as the level rod, sent on Monday, had not yet arrived, it is likely that the missing articles all turned up within a day after Mr. White wrote. I wrote this also to Mr. White.

Very truly yours.

Benj. Smith Lyman.

[illegible] South [illegible] Street, Philadelphia [illegible]

Dear [illegible]:

[illegible] on Joseph Leidy's yesterday, and [illegible] [illegible] [illegible], and he told me that he had within a [illegible] [illegible] that there would be a meeting of the National Academy of Sciences [illegible] on the thirty-first of [illegible] [illegible] going to [illegible] to the [illegible] every [illegible] [illegible] [illegible] [illegible] for several [illegible] [illegible] [illegible] [illegible] [illegible] to come to the meeting and [illegible] [illegible] [illegible] [illegible]. The reason he does not [illegible] [illegible], [illegible] that [illegible] [illegible] trouble him.

[illegible] was not very well, but went [illegible] in the [illegible]. His wife was well and so [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] when he [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] in the [illegible], [illegible] [illegible] to have [illegible] of [illegible]. [illegible] [illegible] [illegible] that [illegible] [illegible] had abundant [illegible] [illegible] [illegible] [illegible] [illegible] [illegible].

[illegible] congratulate you most heartily on your [illegible] [illegible] and am sorry that I am not [illegible] [illegible] to [illegible] [illegible]. [illegible] the Lyman [illegible]. The Scientific meeting at [illegible] will be an additional [illegible] [illegible] [illegible] [illegible] [illegible] the [illegible] meeting too.

[illegible] instrument [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

[illegible]

[illegible] from [illegible]

[illegible]

[illegible] additional [illegible]

[illegible], a weekly new[illegible]

[illegible] Very affectionately [illegible]

The bearer of this, Winfield Scott Caldwell, is now nearly twenty-two years old. When a boy he was a waiter in this city; then he lived for six years, until he became of age, on the farm of Mr. Wm. Perrine, in Cranberry, New Jersey; and since that he has been a waiter in a private house and in a store and otherwise occupied in this city. His mother has lived for many years in this building and is a very worthy woman, and has brought him up to be honest and industrious; and he is very highly spoken of by Mr. Perrine and other employers. My personal acquaintance with Mr. Caldwell is but slight, but from what I have heard and from his looks and behavior I should think that he was quite trustworthy and would make a good waiter, coachman or gardener.

Benj. Smith Lyman.

135 South Fifth Street, Philadelphia;
18 August, 1869.

The bearer of this, Winfield Scott Caldwell, is now nearly twenty-two years old. When a boy he was a waiter in this city, then he lived for [illegible] years, until he became of age, on the farm of Mr. [illegible] Perrine, in Cranbury, New Jersey; and since that he has been a waiter in a private house and in a store and otherwise employed in this city. His mother has lived for many years in this building and is a very worthy woman, and has brought him up to be honest and industrious; and he is very highly spoken of by Mr. Perrine and other employers. My personal experience with Mr. Caldwell is but slight, but from what I have heard and from his looks and behavior I should think that he was quite trustworthy and would make a good waiter, coachman or gardener.

Benj: Smith Lyman.

135 North Sixth Street, Philadelphia;
11 August, 1869.

[illegible] Street, Philadelphia, [illegible] 18[illegible]

[illegible]

[illegible]

[illegible]

[illegible] one [illegible] [illegible] and [illegible] me for [illegible] a way in which [illegible] may be [illegible]. I have looked carefully in the Ledger [illegible] and [illegible], and find [illegible] [illegible] like [illegible] advertised [illegible]; indeed, none, except [illegible] in West Philadelphia [illegible] [illegible] and [illegible] [illegible] Junction Railroad and [illegible] [illegible] [illegible] [illegible] make [illegible] [illegible] and the [illegible] [illegible] [illegible] than I happened [illegible] day. Still I don't [illegible] think you would be willing [illegible] from the [illegible], and [illegible] is [illegible] not very agreeable yet. I went [illegible] and [illegible] [illegible] of [illegible] [illegible] nor offered [illegible]; [illegible] I could not [illegible] Gen. [illegible] (918 [illegible]) on account of his being out of town. I hope however [illegible] in a day [illegible]. Two [illegible] on [illegible] Street [illegible] let again at $1300 each. [illegible] [illegible] 1228 Spruce Street [illegible] as your [illegible]. Mrs. Palmer told me [illegible] going down.

[illegible] [illegible] evening was [illegible] with [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
City [illegible] they have been [illegible] [illegible] [illegible] night [illegible]
[illegible] [illegible] [illegible] [illegible] seems to have been [illegible] since [illegible]
[illegible] [illegible]. [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] Sunday evening I was at the [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] about [illegible] months. Mr. and Mrs. [illegible] have
[illegible] [illegible] [illegible] some [illegible] [illegible] [illegible] back [illegible]
[illegible] — She is [illegible] [illegible] [illegible]. [illegible] [illegible] [illegible] is
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] in November;
[illegible] [illegible] [illegible] Switzerland. — Sunday morning I went out in
[illegible] [illegible] [illegible] [illegible], and saw your husband there too.
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] Church [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] but had a cold [illegible] in his stomach
[illegible] [illegible] [illegible] was condemned to [illegible] [illegible]
[illegible] [illegible] his parents [illegible] [illegible] [illegible] [illegible] [illegible] might
The morning [illegible] [illegible] [illegible] [illegible] and the weather was [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible], and had a pretty
[illegible] [illegible]. [illegible] [illegible] I, [illegible] [illegible] the [illegible] [illegible] by
[illegible] [illegible] [illegible] Mr. [illegible]. There were some [illegible]
[illegible] [illegible] the [illegible] part of the [illegible] and particularly [illegible] [illegible]
[illegible]. — I was at the [illegible] a couple of weeks ago [illegible]
[illegible] [illegible] [illegible] [illegible] months and found [illegible]. [illegible] [illegible] [illegible]
[illegible] [illegible] Springs near Sharon on account of his [illegible], and [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]

[illegible] Philadelphia, Aug. [illegible]

[illegible]

[illegible]

My dear Sir:

Your most welcome favor of the [illegible] is just at hand, and I am delighted to learn by it that you have arrived in America and that I should see you so soon here. I expect to be here for about a week longer at least, and possibly longer than that. I have been looking for you for some time, and feared you might have come during some [illegible] from town, but am very glad that [illegible] not happened so.

Hoping then to have the pleasure of seeing you very soon, I am as ever,

Yours very truly,

Benj. Smith Lyman.

135 South 4th Street Philadelphia [illegible]

C. C. Gordon Esq.
New York

My Dear Sir,

Your [illegible] before yesterday is [illegible] today. I have this morning seen Mr. Withers and explained your not having answered his [illegible] [illegible] requested me to do; and found that he had also a letter from you today. I also saw the day watchman and gave him your assurance [illegible] would be paid. He seems to be a very faithful fellow and has been at [illegible] [illegible] for a number of years. [illegible] [illegible] the [illegible] holes are, it would [illegible] [illegible] to the proper protection of the [illegible] front. He has a family [illegible] [illegible] and has to pay out money monthly for [illegible] [illegible] [illegible] of [illegible] [illegible] clothing, and as he is poor, [illegible] needs the money [illegible] [illegible] him. [illegible] [illegible] [illegible] [illegible] [illegible]. Mr. [illegible] has furnished him [illegible] [illegible] [illegible] [illegible] [illegible] it [illegible] [illegible] [illegible] [illegible] has not paid him in full. The day watchman said [illegible] [illegible] of $132 that was due him when the present Company bought the [illegible]; he was paid in full by Mr. Fredrick [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] their full claims, as we feel the more confidence [illegible] [illegible] [illegible] [illegible] [illegible]. [illegible], [illegible] is very important.

I find that Mr. [illegible] has not got home. He says he will [illegible] again [illegible] [illegible] about his taking a [illegible] while he is the Company's Solicitor. He will also find out whether Mr. [illegible] has begun any proceedings [illegible] [illegible] ground rent of the [illegible] Estate.

Mr. Thomas is getting ready the statements you wish of the sums lent to the Company by Mr. [illegible], and I will enclose it in this before mailing it. He knows nothing of any proceedings of Mr. [illegible], and is from [illegible] not satisfied.

The meeting tomorrow will be postponed until tomorrow week at two o'clock in the afternoon; unless something to the contrary should be recd from you or Mr. [illegible] [illegible] [illegible].

Very truly yours.

Benj. Smith [illegible]

[illegible] Street, Philadelphia, Aug. [illegible]

[illegible]

[illegible] Broadway, New York.

[illegible]

[illegible] forwarded [illegible] at hand. I have seen [illegible]

[illegible] and learned [illegible]

[illegible] the [illegible]

[illegible] affair of [illegible]

[illegible] and [illegible]

[illegible]

[illegible] the engine and indeed

[illegible] in another [illegible]

[illegible] enough for [illegible]

[illegible] He would likewise [illegible]

[illegible] The other machinery could

[illegible] in some part of the building [illegible]

[illegible] connected with

[illegible]

[illegible] would be used by him. He

[illegible] a capital of [illegible]

[illegible] would be satisfied with a [illegible] years. He

[illegible] building [illegible]

[illegible] and would pay [illegible] from that time [illegible]

[illegible] the Company [illegible] of three years [illegible]

[illegible] or four years longer [illegible]

[illegible] of the [illegible] years. He would

be [illegible] but he hardly thinks that

[illegible] low enough to suit him. Indeed [illegible] he professed to be

[illegible] but he likes the place very well, better than [illegible]

[illegible] He would wish for but little [illegible] he would

like to have a [illegible] He expects to have 800 or 1000 [illegible]

[illegible] and may after all be dissatisfied [illegible]

[illegible] railroad [illegible]

[illegible] much pleased with [illegible]

[illegible] would have a meeting [illegible]

Mr. R. C. [illegible] 1000 in gold [illegible]

[illegible]

[illegible]

[illegible] Philadelphia, Aug. [illegible]

[illegible] Esq. No. [illegible] Broadway, New York.

[illegible]

[illegible] Fifth Street [illegible]

R. H. [illegible] Esq.

[illegible]

My dear Richard:

Your welcome favor of yesterday is at hand, and I am much pleased at [illegible] possibility of a visit [illegible] with you. It is quite uncertain [illegible] I may be [illegible] [illegible] the western Pennsylvania [illegible] [illegible] [illegible] [illegible] I shall [illegible] [illegible] [illegible] your company would be delightful.

Can you [illegible] [illegible] [illegible] If you [illegible] for some [illegible]

Very truly yours. Benj. [illegible]

[illegible] Street, Philadelphia, [illegible]

Mrs. [illegible]
[illegible]

[illegible]

I have not yet been able to find [illegible] [illegible] at the corner of [illegible] [illegible] in every day. But I [illegible] [illegible] [illegible] is offered at $[illegible] a year [illegible] and the kitchen is in the base[ment] [illegible] of [illegible] [illegible] is offered at $[illegible] a year and [illegible] floor and a [illegible] No. 1214 [illegible] Spruce Street [illegible] offered [illegible] a year, houses of about the same size as [illegible] No. 1324 Spruce Street, corner of [illegible] [illegible] for [illegible] $[illegible] [illegible] has been [illegible] [illegible] the back building [illegible] No. 600 [illegible] [illegible] [illegible] [illegible] [illegible] with [illegible] in front [illegible] Two [illegible] on [illegible] [illegible] and the [illegible] are offered at [illegible] a year, [illegible] with a kitchen in the basement, and [illegible] [illegible] [illegible] [illegible] and with all conveniences. [illegible]

[illegible] [illegible] the average [illegible] spent a day, or a [illegible], making [illegible]
[illegible] [illegible] fifty cents a day, or nearly two hundred dollars in a full year,
[illegible] a hundred and fifty in the time you spend in [illegible]; and this would
perhaps be a hundred dollars more than if you had a house [illegible]
[illegible]. I think you would [illegible] like one of the [illegible] mentioned [illegible]
[illegible] [illegible] Street or the Fifteenth Street. I would like to know your [illegible]
[illegible] [illegible] [illegible] [illegible] mean [illegible] as it is hardly worth while for me to
go [illegible] houses until I [illegible] something more definite about your
[illegible] and wishes about [illegible]. It is not to be supposed either that
[illegible] now to let will remain vacant for a couple of [illegible],
but it would be useless to [illegible] them very closely if you do not [illegible]
to secure them before [illegible]. There seems to be some difference of opinion
[illegible] [illegible] rents will go down much; at least one of these houses [illegible]
[illegible] so. In other respects nothing would be lost in taking a house some
time before you come [illegible] (except the uncertainty you may have about
what you [illegible] with [illegible]) because you would be likely to leave
it [illegible] some time in July; so that it would be unoccupied the
longer [illegible] the [illegible] [illegible] [illegible] you take it [illegible]. Unless you think
some of these houses [illegible] specially good chances not to be lost, (say on
account of their [illegible] [illegible] neighbor[illegible] [illegible] with,) I think
perhaps [illegible] as well to [illegible] wait for a few weeks, until you are
ready to make a decided move; [illegible] [illegible] [illegible] try to see [illegible]
There of no rooms [illegible] of [illegible] [illegible] as you would like;
and if [illegible] will [illegible], it might be a chance to snatch at. These now
[illegible] on 3[illegible] Street are perhaps a good [illegible], for the rent seems
low for houses of [illegible]; they have a great many rooms (14) but not
large ones. The one [illegible] preferred has dining room and kitchen [illegible]
towards the [illegible]; the other one has them towards the north. They are
very handy to the [illegible] [illegible]; but perhaps you do not like
the neighborhood. Besides [illegible] you do not need so many rooms; still
you seem likely [illegible] to [illegible] move [illegible] a suitable house elsewhere; then too, as
the rooms are small you would perhaps have to spoil your carpets by cutting or
folding them [illegible] the right [illegible]. The [illegible] [illegible] house would be near the [illegible]
[illegible] [illegible] [illegible] office
and [illegible] Parrish and [illegible]; but the Fifteenth St. one would be near
the [illegible], the [illegible] [illegible] [illegible]) and to [illegible] School and Music
teacher. Perhaps some difference in the [illegible] may weigh with you, after they are looked
into. If you think [illegible] [illegible] [illegible] [illegible] looked into right away.

With my best love to the girls, believe me as ever

Very affectionately yours.

Benj. Smith Lyman.

135 South Fifth Street, Philadelphia, 13 Aug. 1867.

L. Lesquereux, Esq.,
Columbus, Ohio.

My dear Sir:

Your favor of day before yesterday is most welcome; but I am very sorry to hear by it that both you and your family have met with ill [illegible]. The account you give of your eyes also fills me with regret; but I trust that they will now continue to improve, and I hope rapidly. As for your determination not to go to Northampton this summer, may I not hope that you will reconsider it, as there are still some two weeks? I had yesterday a letter from Mr. Lesley in answer to those I had written telling of [illegible] to hold the meeting there; and he said they all hoped you would come. You say you and your wife are now alone; I am sure it would add to their pleasure very much if you would bring her along with you. So, do think the matter over, and if possible change your mind. At any rate, don't talk about never going to Northampton again. If you withdraw from the Academy as you think of doing, the other members will be very sorry, and would no doubt much rather have you continue a member [illegible] give place for another as you propose. On account of the Northampton meeting it would be very much regretted; and some fellow members fear it would probably tend more than ever to complete breaking up of the Academy. That would be hastened by such numerous withdrawals of the weightiest members. I believe even Prof. [illegible], who helped give rise to the Academy, talked of withdrawing at the last meeting in Washington, because so many things were wrong in it.

Should I ever pass anywhere within a considerable distance of Columbus, I shall certainly give myself the pleasure of calling upon you there; and I hope for that very reason that my business may some time take me in that direction.

Mr. Lesley, I think, will be unable to go to the meeting at Northampton, and very [illegible], indeed, to go to the meeting [illegible] next week. He would also be delighted to see you.

Still hoping, then, that you will come to Northampton, I remain
Very affectionately yours,
Benj. Smith Lyman.

[illegible]

[illegible]

Columbus, O.

My dear Sir: [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

135 South Fifth Street, Philadelphia 13 Aug. 18[illegible]

Hon. [illegible] H. [illegible], Esq.
New York.

D. S.

Your favor of the twelfth came duly to hand. Mr. [illegible] [illegible] was here [illegible] and spoke of the account you had handed [illegible] the [illegible] Car Company, but it seemed to him that [illegible] it would be to have that account approved of by [illegible] the board of directors and the payment ordered, or a [illegible] for the amount [illegible] by the president. In point of time nothing can be gained by any steps taken before the fifteenth of September [illegible]. [illegible] we will let the matter lie until the meeting [illegible] Thursday [illegible].

In talking about his taking a directorship, he said he [illegible] [illegible] in [illegible] Company, which for [illegible], and [illegible], refused afterwards to compensate him for his legal services.

I may possibly leave town on Tuesday or Wednesday and [illegible] unable to be at the meeting of Thursday, but in that case will let you know more certainly before the time comes.

Very truly yours.

Benj. Smith [illegible]

[illegible] South [illegible] Street Philadelphia [illegible]

[illegible]

[illegible] House Hotel [illegible]

My Dear Sir,

[illegible] and I am pleased [illegible] you [illegible]. [illegible] to the meeting of [illegible] Academy of Science at Northampton [illegible] have been [illegible] still live. [illegible] you [illegible] and you might [illegible] men who would [illegible] them. I am [illegible] have a good [illegible] Northampton [illegible] although [illegible] It [illegible] & Salem, [illegible] meeting [illegible] if anything should [illegible] I will [illegible].

[illegible] you [illegible]

I am [illegible]

Very truly yours,
[illegible]

[illegible]

[illegible]

[illegible] came [illegible]
[illegible] account [illegible]
[illegible]
[illegible]
[illegible]
[illegible] report [illegible] some five million [illegible]
[illegible]
[illegible] females [illegible] inherit equally [illegible]
[illegible] the property
[illegible] thousand
[illegible] three million [illegible]
[illegible]
[illegible]
[illegible] you are [illegible]
[illegible]
there [illegible] imagine that they
[illegible] nothing
[illegible]
[illegible] of the [illegible]
[illegible] He did not [illegible]
[illegible]
[illegible]

[illegible]
social, [illegible]

I have a letter from [illegible] saying that [illegible]
[illegible] Northampton [illegible] that he [illegible]
[illegible] or [illegible] his infirmities prevent [illegible]
[illegible] to write [illegible] but that he would
be [illegible] if he could [illegible], which he [illegible]
[illegible] spring; and expresses great regret at [illegible]
[illegible] days in [illegible]. If you go to Northampton, please
[illegible] your [illegible] and say [illegible] that I
[illegible] himself and all your family
[illegible] full of gratitude, affection and respect [illegible]
[illegible] have been so weak that he has had to give
[illegible] for some months [illegible] to [illegible]
[illegible] and that he [illegible] great [illegible]
[illegible] it would be an immense [illegible]
[illegible] that he had within a week [illegible] his eldest [illegible]
[illegible] with him; [illegible]

I write again in hopes that he might [illegible]
[illegible] and [illegible]
[illegible]
[illegible]

I think [illegible], pleasant
[illegible] and [illegible]
I have not [illegible] for several days
[illegible] your [illegible]
[illegible] that he will be there, at [illegible] again [illegible].
[illegible] is my [illegible]. Your affectionate Son [illegible]

135 South Fifth Street, Philadelphia; 16 Aug. 18[illegible]

F. H. Delano Esq.

No. 57 Broadway, New York.

My dear Sir:

Mr. Leys writes me to-day that there will be [illegible] [illegible] before the twentieth of September, so that there is no [illegible] [illegible] against the H. C. Company; and that if the [illegible] on or before the tenth of September it will [illegible].

I expect to be here on Thursday, and can be at the [illegible].

Very truly yours.

Benj: Smith Lyman.

135 South Fifth [illegible] [illegible]delphia;
18 Aug. 1869.

Prof. J. P. Lesley.

[illegible]

The bearer of this is my excellent friend Mr. Felix [illegible] who has just come [illegible] Paris to settle in America. He is the [illegible] of that interesting little book [illegible] [illegible], and of some brief notes in [illegible] [illegible] to certain [illegible] rock oils, an extract from the proceedings of the [illegible] [illegible] that was presented by you to [illegible] library of the American [illegible] society a few months ago. You will find [illegible] a most agreeable gentleman, [illegible] [illegible] [illegible] [illegible] [illegible] and general [illegible]; and any attention you may [illegible] able [illegible] show him will be reckoned an [illegible] [illegible] by

Yours very [illegible]ctionately
Benj. Smith Lyman.

[illegible] Phila[illegible]
[illegible] May, 18[illegible]

Dear [illegible]:

The bearer of this is Mr [illegible] [illegible], a [illegible] engineer and a [illegible] friend of mine, who has just come [illegible]. You will find him [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

Yours [illegible]

[illegible] [illegible]

Philadelphia, 18 Aug. 1859.

My dear cousin:

The bearer of this is my particular friend Mr. Felip [illegible], a French civil engineer, [illegible] of whom I have already spoken [illegible] as the author of that excellent little [illegible] Mémoire [illegible] Travail that you saw me reading last summer. You will find him a very agreeable man, and [illegible] in forming [illegible] [illegible] with [illegible] oblige [illegible] [illegible] that he has come to this [illegible] to [illegible] American [illegible] [illegible] you be able to show him [illegible] [illegible] would be also [illegible] your friend.

Yours [illegible] affectionately,

Benj. Smith [illegible]

[illegible] will [illegible] as soon as possible.

[illegible]

35 South Eighth St.[illegible] Philadelphia, [illegible]

[illegible]

My dear Sir:

[illegible] Mr. [illegible] [illegible] appearance [illegible] [illegible] [illegible] [illegible]. [illegible] [illegible] will [illegible].

I [illegible] to [illegible] Philadelphia [illegible] afternoon [illegible] that the meeting [illegible] adjourned until Friday, the twenty [illegible] of this month [illegible] as you desire. Mr. [illegible] [illegible] the letter [illegible] herewith [illegible] president and [illegible] of the [illegible] Company. [illegible] day [illegible] [illegible] the opportunity of having an interview [illegible]. He says he [illegible] from [illegible]. [illegible] only twenty five [illegible] since the twenty [illegible] of May, and [illegible] is in great [illegible] [illegible] his [illegible] [illegible] for his wife and children. He [illegible] very [illegible] [illegible] and [illegible] been on the place five [illegible] [illegible] [illegible] [illegible] with [illegible] [illegible] him [illegible] very good [illegible] of the [illegible]. The [illegible] [illegible] was [illegible] fifteen years [illegible] [illegible] [illegible] money, [illegible] that he [illegible] a little [illegible] on the Company's land [illegible] and [illegible] Mr. [illegible] [illegible] a little money [illegible] [illegible]. [illegible] [illegible] that they can [illegible] [illegible] without money, [illegible] needs [illegible] [illegible] current [illegible] [illegible] part of [illegible] pay [illegible] him. As he is poor it is a matter of necessity with him to get [illegible] money, [illegible] could [illegible] [illegible] left the place [illegible] [illegible] [illegible] that [illegible] will be paid some time will not provide him and his family with food [illegible]. He suggested that if no one of the Company [illegible] [illegible] money for the [illegible] [illegible] might [illegible] (in small lots from week to week if need be) as was done once before in [illegible] emergency. I [illegible] from the inventory that there is of [illegible] cast iron 1824 lbs, valued [illegible]; of pig iron 5782 lbs., valued at [illegible]; and of [illegible] wrought iron 450 lbs., valued at $85.75 making [illegible] in [illegible]. His plan seems quite feasible and [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. [illegible] will [illegible] [illegible] until Saturday [illegible] [illegible]

[illegible]

[illegible] Hoping that your [illegible] [illegible] [illegible] [illegible]

Very truly yours

[illegible]

[illegible]

15 South Fifth Street, Philadelphia; [illegible] '49.

[illegible] Esq.
No. 5[illegible] Broadway, N. York.

Dear Sir:

Your telegram [illegible] this morning came duly to hand, and in compliance with it the stockholders meeting of the Union Car Company [illegible] adjourned to the ninth of [illegible] next at two o'clock. [illegible] Philadelphia [illegible] of the stockholders was [illegible] was here, and as he said nothing about [illegible] I suppose he has no [illegible]. Mr. Power [illegible] this morning, and said the papers for the [illegible] of the [illegible] would [illegible] quite ready [illegible] the absence from town of one of the parties interested. [illegible] adjournment for a week in case no word should come from you [illegible] an adjournment [illegible] the eighth of September, as your arrangement of that matter will [illegible] with him. He urged very strongly that Mr. [illegible] [illegible] apportionment paper before its final submission to [illegible] their attorneys, as they may [illegible] the apportionment [illegible] if any change should be desired on one side after they have [illegible] the paper [illegible] signed it.

Very truly yours.

Benj. Smith Lyman.

181

[illegible] Philadelphia [illegible]

[illegible] Esq. [illegible]

[illegible]

[illegible]

Very truly yours,

[illegible]

[illegible] Philadelphia, 27 Aug. 1839.

Dear Mary:

[illegible] day [illegible] has [illegible] the [illegible] of the liveliness [illegible] society of Northampton [illegible] present [illegible] such [illegible] of company.

[illegible] is [illegible] much duller than in the winter, so many of [illegible] were gone away to enjoy vacations and [illegible] from the [illegible] the absorbing topic here is the scarcity [illegible] the drought, and [illegible] you have doubtless [illegible] we had no rain here [illegible] weeks ago. The [illegible] and the [illegible] and then [illegible] beautiful [illegible] on those [illegible] has been [illegible] and [illegible] but [illegible] [illegible] expected [illegible] more particularly a thorough [illegible] friends [illegible] from time [illegible] have been [illegible] the [illegible] of several [illegible] young [illegible] instrument and [illegible] besides [illegible] in the [illegible]

[illegible] to prove so as to remind in such a manner that it will be quite
different from what it was when first approved of, and much better.
[illegible] going [illegible] correct for it, and have found it quite [illegible]
undertaking to write a description of it with all its variations. [illegible]
[illegible] however. [illegible] a good while before the instrument will be really
made, as the senior partner of the instrument maker continues to
unwell for the junior to explain it to him and get his agreement
to undertake the making of it under the terms I proposed. [illegible]
[illegible] the author of the little book you begun to read about things
[illegible] arrived here ten days ago. He has come to America
[illegible] settle at first in [illegible], but he will not bring
his wife and children to America until next year. He is a very nice
[illegible] and as he expects to be at Northampton during the meeting of
[illegible] next week. I gave him a letter to [illegible] who will find
[illegible] a most agreeable acquaintance. I was afraid
[illegible] not be able to introduce him in person, as I should very
[illegible] to have done; and I see now no prospect of doing so.
[illegible] English [illegible] well already, and when he was here three
[illegible] ago declared his intention of becoming an American citizen,
[illegible] seems to be enchanted with this country, in fact almost to [illegible]
[illegible] everything through rose colored glasses. After he had gone from [illegible]
[illegible] Meeting (where I see he read a paper) I had a chance to [illegible]
[illegible] one day with a young [illegible] that he said to me
[illegible], and with a
[illegible] one who has also come [illegible] in America, and with a
[illegible] opinion of it. — Mr. Hopper has had me dine twice at his
[illegible] within a fortnight and has stuffed me with vegetables [illegible]
[illegible] and [illegible] help him buy and hang a large map of the [illegible]
[illegible] of his dining room. He and his wife seem very [illegible]
[illegible] Your affectionate brother. Benj. Smith Lyman
[illegible] book.

[illegible] — May [illegible]

[illegible] Esqre —
[illegible]

Dear Sir

I [illegible] very glad to learn by your favor of the [illegible] [illegible] have been so fortunate as to find [illegible] with Mr. [illegible]. The pay, as you say, is [illegible] [illegible] with [illegible] [illegible] language [illegible]. [illegible] that has been ac[illegible] I [illegible] would [illegible] your [illegible] with him [illegible] pay you [illegible] indeed [illegible] another.

I [illegible] read a [illegible] the "Construction of three maps of Europe, [illegible] America, in the [illegible] Projection, with a view to [illegible] Earth's Figure." [illegible] [illegible] meeting of the [illegible] Academy of [illegible].

[illegible] you [illegible] your [illegible] and yours [illegible] and

Very truly yours. Benjamin [illegible]

[illegible] Philadelphia [illegible] 18[illegible]

Mrs. [illegible]
Milton Hill, Mass.

My dear Aunt

Your favor of the [illegible] came duly to hand [illegible] in regard to houses, and I find [illegible] I did not [illegible] away but [illegible] because I thought from what [illegible] he would satisfy you about [illegible] from him but you still wished to have it [illegible]. On the first floor it has two rooms [illegible], on the left of the front door [illegible] front parlor [illegible] on the right of the front door. Both [illegible] [illegible] two rooms of the same size, with a [illegible] room [illegible] big room. On the third story [illegible] right of the front door and behind [illegible] [illegible]. There are [illegible] [illegible] the third story [illegible] [illegible] third story [illegible], the big one in [illegible] big room [illegible] first story have [illegible] [illegible] in the [illegible] [illegible] the cellar [illegible] under the [illegible] [illegible] The stairs [illegible] stairs, and the [illegible] [illegible] the house. The [illegible] is quite [illegible] [illegible] the parlors and front [illegible] [illegible] a little [illegible] [illegible] rooms. [illegible] [illegible] on the east. The house [illegible] [illegible] 1000 [illegible] is asked [illegible] until you could write [illegible] of its situation, there is [illegible] [illegible] house [illegible]

[illegible] [illegible] [illegible] [illegible] John [illegible]

[illegible] ... 1813. [illegible]
[illegible] wide, [illegible]
[illegible] of the same [illegible]
[illegible] floor. [illegible] is no [illegible]
[illegible] feet long [illegible] has a little yard back of it [illegible]
[illegible] the back side of the building. The front room [illegible]
floor [illegible] the front door [illegible]
[illegible] room, [illegible]
[illegible]
[illegible] a passage [illegible] folding [illegible]
[illegible] of good [illegible] off [illegible]
[illegible] is not high, and [illegible]
[illegible] the [illegible] and [illegible]
[illegible] with also a passage way between them
[illegible] folding doors at end and [illegible]. [illegible] is a [illegible]
[illegible] between the [illegible]
[illegible]
[illegible]
[illegible] The cellar [illegible] the front [illegible]
[illegible]
[illegible]
[illegible] and. The back [illegible]
[illegible]
[illegible] room between the two rooms [illegible]
[illegible] is [illegible]. The front [illegible]
[illegible] south, and the [illegible]
[illegible]
[illegible] is hidden by the [illegible]
[illegible] windows and [illegible]
[illegible] from the [illegible]
[illegible]
[illegible]
[illegible]
[illegible] very wide [illegible]
[illegible]
[illegible] and [illegible]
[illegible] and [illegible]. On the whole [illegible]
[illegible] of [illegible] might perhaps be [illegible]
[illegible]
[illegible]

135 South Eighth Street, Philadelphia, [illegible] Aug. [illegible]

Prof. S. S. Haldeman,
Columbia Pa.

My Dear Sir:

I read with great interest and pleasure the [illegible] you were so kind as to give me the other day; and am [illegible] you mean to give [illegible] the [illegible] dictionaries [illegible] circulation by publishing it in a little different [illegible]. One little class of omissions in both dictionaries has struck me, [illegible] tioned by you; and that is the names of the letters. [illegible] is not a word, as much as the name [illegible] of any kind, [illegible] more than [illegible]. [illegible] certainly as much [illegible] as alpha or omega, both of which are given and [illegible] names of [illegible]. [illegible] is given in one dictionary as "[illegible]" [illegible] as [illegible] of [illegible] [illegible] a [illegible] instrument is not given. "[illegible]" is given, [illegible] [illegible]. [illegible] is given in one of the dictionaries. The plural of [illegible] is [illegible] in both, as sometimes [illegible] written "[illegible]"; [illegible] the [illegible] [illegible] by analogy to the plural. [illegible] not given [illegible].

I was also much interested in the [illegible] of [illegible] with [illegible] and [illegible] [illegible]. [illegible]

[illegible] in that [illegible] that you [illegible] [illegible]. I [illegible] [illegible] [illegible] with the same [illegible] in [illegible].

Very truly yours, Benj. Smith Lyman.

187

N. [illegible] South Eighth Street, Philadelphia, [illegible] Aug. [illegible]

Benj. F. H[illegible],
Columbia Pa.

My dear Sir:
I read with great interest and pleasure the [illegible]

[illegible]

Very truly yours [illegible]

The [illegible] Company's Consent of [illegible]

[illegible]

[illegible] High Street, Philadelphia, [illegible]

[illegible]:

I am [illegible] by your favor of last Thursday [illegible] Father has been ill. I am very glad however that [illegible] you have [illegible] the [illegible] and hope that he had a pleasant visit [illegible] and [illegible] your [illegible]. He is a very nice man and I think you will find pleasure in his acquaintance and he [illegible] will no doubt be very much pleased [illegible] most of his [illegible] [illegible] [illegible] from which he has been [illegible] [illegible] [illegible] on account of the [illegible] [illegible] he [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] all [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] your [illegible] [illegible] [illegible] [illegible] [illegible] a [illegible] [illegible].

I am very much obliged to you for the very pleasant account of the meeting [illegible] I hope you are [illegible] in these days in [illegible] of finding in the same [illegible] as in former years; but the [illegible] [illegible] [illegible].

[illegible] of [illegible] too little general interest to be noticed [illegible] [illegible] [illegible] the [illegible] [illegible] as well as the letter in the [illegible] [illegible] [illegible]

The [illegible] did arrive here last Wednesday, as I found by calling [illegible] [illegible] parlor window [illegible] [illegible] and are fitted [illegible] [illegible]. The [illegible] have become much [illegible] [illegible]. Dr. [illegible] [illegible] and you must [illegible] in your letter, [illegible] and her doings [illegible] upon between [illegible] as their means of [illegible] instead of [illegible] [illegible] other. [illegible] arrived from [illegible] on Thursday. [illegible] week, the fifteenth, and they [illegible] [illegible] [illegible]. [illegible] [illegible] all [illegible] [illegible] the other came [illegible] a very nice [illegible] [illegible]. [illegible] that I [illegible] last week as well [illegible] [illegible] all [illegible] your [illegible] [illegible] you [illegible] [illegible] is still [illegible].

[illegible] [illegible] [illegible] [illegible] [illegible] though [illegible] [illegible]

[illegible] [illegible]

[illegible], [illegible]. The [illegible] was [illegible] very [illegible]. The [illegible] [illegible] may [illegible] [illegible] [illegible].

[illegible] Street, Philadelphia, [illegible]

[illegible]

[illegible]

[illegible] had [illegible] appointment [illegible]

[illegible]

[illegible]

[illegible]
[illegible]

[illegible]
[illegible]
[illegible]

[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

[illegible]

Easy Rules for Astronomical Refraction.

By Benjamin Smith Lyman.

In using the solar compass as well as other astronomical instruments the refraction of the atmosphere must be taken into account as changing the apparent place of the sun or other heavenly bodies. In the zenith the apparent place of such a body is not affected by refraction, but everywhere else it is a little above the true place; little near the zenith, but more and more towards the horizon, and some thirty five minutes at the horizon. The amount of displacement changes too with changes in the weight and heat of the air as shown by the barometer and thermometer. Near the horizon the refraction is great and changes very fast with a small change of the true height or altitude; and besides the rays of light then pass for a greater distance through the air and through much of it quite near to the earth's surface, they are greatly exposed to change from variations along their path in the weight and heat of the air, variations that are clearly mostly quite unknown. Hence astronomers say that no table of refraction can be depended on within five degrees of the horizon, although tables are given all the way from the zenith down to the horizon.

It is customary to calculate the refraction for any given height of a heavenly body and for any state of the air by means of the tables and by complicated formulas. But for the solar compass, which has no means of marking the refraction nearer than to full minutes; and, indeed, for sextants or other instruments that do not read closer than to five seconds, two or three very simple rules are as good as the tables for all heights above three degrees and a half; and observations should not be made lower than that, at any rate. These rules are very easy to remember and by them the refraction can readily be calculated in the head.

The first rule is for the mean refraction, that is, the refraction when the barometer is at thirty inches and the thermometer at fifty degrees, Fahrenheit: Add one degree and three quarters (1°45′) to the true altitude, and divide sixty-eight degrees (68°) by the sum; take one half (½) from the quotient, and the remainder will be the number of minutes of mean refraction. For example, to find the refraction for a true altitude of seven degrees and fifty-eight minutes:

$$\frac{68^\circ}{7^\circ 58' + 1^\circ 45'} - \frac{1}{2} = \frac{68}{9\frac{3}{4}} - \frac{1}{2} = 7 - \frac{1}{2} = 6\frac{1}{2};$$

and the refraction is six minutes and a half, exactly as given in the table of refraction in Chauvenet's Astronomy (1863). With an instrument like the solar compass that marks the refraction only

2

The Nautical Almanac determines the refraction for any given height of a heavenly body and for any state of the air by means of the tables and by complicated formulas. For portable instruments, which have no means of knowing the refraction nearer than a full minute; and indeed, for sextants or the instruments that do not read closer than to five seconds, two or three very simple rules are as good as the table for all heights above ten degrees and a half and observations should not be made lower than that at any rate. These rules are very easy to remember and by them the refraction can readily be calculated in the head.

The first rule is for the mean refraction, that is, the refraction when the barometer is at thirty inches and the thermometer at fifty degrees, Fahrenheit: Add one degree and three quarters (1°.75) to the true altitude, and divide eighty eight degrees (88°) by the sum; take one half (½) from the quotient and the remainder will be the number of minutes of mean refraction. For example, to find the refraction for a true altitude of ten degrees and fifty eight hundredths:

$$\frac{88°}{10.58+1.75} - \frac{1}{2} = \frac{88}{12.33} - \frac{1}{2} = 7 - \frac{1}{2} = 6\frac{1}{2}:$$

And the refraction is six minutes and a half, exactly as given in the table of refraction in Chauvenet's Astronomy (1863). With an instrument like the sextant we need not trouble the refraction, as

to the nearest full minute the whole number of the quotient will simply be taken as the refraction; as, seven, in the example just given. For plainly any quotient between seven and eight would answer to a refraction between six and a half and seven and a half, that is, in round numbers to seven.

The following table, chiefly for every odd half minute of refraction, shows the altitudes down to two degrees for which the amounts of refraction are calculated by the rule, and the refraction for the same altitude by the table, and the difference between the two, or the error of the rule.

True Altitude	Refraction by rule	Refraction by tables	Error of Rule
90° 0′	0′ 14″.4	0′ 0″.0	+14″.4
[illegible] 0	0 28.5	0 23.6	+4.9
66 15	0 30.0	0 25.6	+4.4
60 0	0 36.0	0 33.6	+2.4
57 0	0 39.6	0 37.8	+1.8
32 15	1 [illegible]·0	1 32·0	−2·0
20 55	2 [illegible]·0	2 31·0	−1·0
15 15	3 30·0	3 29.7	+0·3
11 51	4 30.0	4 29.2	+0·8
9 35	5 30.0	5 29.3	+0·7
7 58	6 30.0	6 30.0	0·0
6 45	7 30·0	7 31·0	−0·8

to the nearest full minute the whole number of the quotient will simply be taken as the refraction, as shown in the example first given. Any (whole) quotient between seven and eight would answer. The refraction between six and a half and seven and a half ditto, is a good example of them.

The following table, chiefly for every odd half minute of refraction, shows the altitudes down to two degrees for which the amounts of refraction are calculated by the rule, and the refraction for the same altitude by the table, and the difference between them, or the error of the rule.

True Altitude	Refraction by rule	Refraction by table	Error of Rule
90° 0'	0' 14.4"	0' 0.0	+14.4
68 0	0 28.5	0 23.6	+4.9
66 15	0 30.0	0 25.6	+4.4
60 0	0 36.0	0 33.6	+2.4
57 0	0 39.6	0 37.8	+1.8
32 15	1 30.0	1 32.0	−2.0
20 55	2 30.0	2 31.0	−1.0
15 15	3 30.0	3 29.7	+0.3
11 51	4 30.0	4 29.2	+0.8
9 35	5 30.0	5 29.3	+0.7
7 58	6 30.0	6 30.0	0.0
6 45	7 30.0	7 31.1	−0.4

4

5°	48'	8' 30".0	8' 29".9	+0".1
5	3	9 30·0	9 32·3	−2·3
4	26	10 30·0	10 31·0	−1·0
3	55	11 30·0	11 29·5	+0·5
3	29	12 30·0	12 28·5	+1·5
3	6	13 30·0	13 27·2	+2·8
2	47	14 30·0	14 40·	−10
2	30	15 30·0	15 19·	−11
2	15	16 30·0	16 9·	−21
2	2	17 30·0	16 58	−32

It is clear that for any altitude above two degrees and a half the rule is quite exact enough for every instrument that does not read closer than half minutes; and from three degrees and a half up to six degrees for any instrument that reads only to five seconds.

The second rule is for instruments that read to five seconds: <u>The mean refraction between the zenith and fifty seven degrees (57°) of altitude is eleven tenths</u> $\frac{11}{10}$ <u>of a second (1".1) for every degree of distance from the zenith</u>. For example, the refraction at 75° of altitude is by this rule 16".5, or only one second more than is given in the tables; and this is the greatest error of the rule anywhere above 57°; and at 57° the error is only 1".5

5° 48'	8° 30.0	8° 29.9	+0.1
5 3	9 30.0	9 32.3	-2.3
4 25	10 30.0	10 31.0	-1.0
3 53	11 30.0	11 29.5	+0.5
3 29	12 30.0	12 28.5	+1.5
3 6	13 30.0	13 27.2	+2.8
2 47	14 30.0	14 31.0	-1.0
2 30	15 30.0	15 19	-11
2 15	16 30.0	16 9	-21
2 2	17 30.0	16 58	-32

It is clear that for any altitude above five de= grees and a half the rule is quite exact enough for any instrument that does not read closer than half minutes; and from three degrees and a half up to nine degrees for any instrument that reads only to five minutes. The second rule is for instruments that read to five seconds: The mean refraction between the zenith and fifty three degrees (53°) of altitude is about that of a second (1") for every degree of distance from the zenith. For example, refraction at 53° of altitude is by this rule 1'.5", or only one second more than is given in the table; and this is the greatest error of this rule anywhere above 53°; and at 57° error is only 1".5

The third rule is for the allowance to be made for change of the barometer and thermometer, and is simply: <u>Add to the mean refraction at the rate of doubling for a rise of thirty inches in the ~~thermom~~ barometer or for a fall of five hundred degrees in the thermometer</u>. The refraction should of course be lessened at the same rate for a fall of the barometer or rise of the thermometer. The rule is exact for the barometer; and agrees with Chauvenet's tables between fifty and a hundred degrees of the thermometer, but gives slightly too little refraction for a low state of the thermometer. This error, however, at ten degrees below zero is according to Chauvenet's tables only eighteen seconds for a mean refraction of ten minutes; and according to the tables given in Norton's Astronomy ~~(1845)~~ is only eleven seconds. At zero the error for the same mean refraction would be only fourteen seconds by Chauvenet's table. This rule, then, is quite exact enough for any instrument that does not read closer than half minutes, and all ordinary weather and altitudes even for instruments that read to five seconds.

The following table gives the true and apparent altitudes down to five degrees for every odd half minute of mean refraction, that is, the altitudes at which the amount of refraction changes from one minute to the next when only full minutes

5

The third rule is for the allowance to be made for change of the barometer and thermometer, and is simply: Add to the mean refraction at the rate of a thirtieth for a rise of one inch in the barometer, or for a fall of five hundred degrees in the thermometer. The refraction should of course be diminished at the same rate for a fall of the barometer or rise of the thermometer. The rule is exact for the barometer; and agrees with Bradley's table between fifty and a hundred degrees of the thermometer, but gives rather too little refraction for a low state of the thermometer. This error, for instance, at ten degrees this gives is according to Bradley's table only eighteen seconds for a mean refraction of three minutes; and according to the table given in Vince's Astronomy ~~[illegible]~~ is only eleven seconds. It gives the error for the same mean refraction would be [illegible] fifteen seconds by Bradley's table. This rule, then, is quite near enough for any instrument that does not read closer than half minutes, and with ordinary watches and altitude even for instruments that read to five seconds.

The following table gives the true and apparent altitudes down to five degrees for every odd half minute of mean refraction, that is, the altitude at which the amount of refraction changes from one minute to the next when only full minutes

are taken account of, as in the solar compass:

~~True Altitude. Apparent Altitude. Equal Refraction.~~

Altitude. True	Altitude. Apparent	Refraction. Equal	Refraction. Elapsed minutes
90° 0′	90° 0′	0′ 0″	0
62 46	62 46	0 30	1
32 40	32 42	1 30	2
21 3	21 5	2 30	3
15 14	15 17	3 30	4
11 49	11 53	4 30	5
9 34	9 39	5 30	6
7 58	8 4	6 30	7
6 46	6 54	7 30	8
5 50	5 58	8 30	9
5 5	5 14	9 30	10
4 27	4 38	10 30	

The foregoing tables have been made from the table in Chauvenet's Astronomy with the help also of the older ones given in Norton's Astronomy (edition of 1867).

185 South Fifth Street, Philadelphia;

10 September, 1869.

6

are then accordingly, as in the table annexed:

~~Latitude ... Philadelphia.~~

Altitude.		Refraction	
True	Apparent	Second	[illegible]
90°0'	90°0'	0'0"	30
62 46	62 46	0 30	1
32 40	32 42	1 30	2
21 3	21 5	2 30	3
15 14	15 17	3 30	4
11 49	11 53	4 30	5
9 34	9 39	5 30	6
7 58	8 4	6 30	7
6 46	6 54	7 30	8
5 53	5 58	8 30	9
5 5	5 14	9 30	10
4 27	4 38	10 30	

The foregoing table was ... from the Table in [illegible] Astronomy with the help also of the rule ... given in [illegible] Astronomy (article [illegible]).

[illegible] Philadelphia;

11 [illegible] 18[illegible]

[illegible] Philadelphia; [illegible] 1849.

To the Commissioner of Patents
Washington, D.C.

Enclosed please find an application for a caveat and [illegible] for [illegible] deposited with the assistant treasurer of the United States here.

I take the liberty also of begging you to send me the last [illegible] of the [illegible] issued by the Patent Office for the [illegible] to be taken in applying for patents; so that I may know [illegible] of the drawings to be made and other particulars.

Very respectfully yours,
Benj. Smith Lyman.

135 South 4th [illegible], Philadelphia, [illegible]

A. Edwards Esq.

Montgomery Ala.

My dear Sir:

Your favor of [illegible] of this month is at hand, together with the mineral [illegible] pamphlets sent at the same time.

The mineral is clearly nothing of value, merely a carbonaceous slate or shale, with only enough carbonaceous matter in it to give a shining black colour, and I think, therefore, [illegible] the expense of a chemical analysis [illegible]. Still, if you [illegible] upon having such an examination made, I will have [illegible] for you, but will wait for further [illegible] to that effect.

Very respectfully [illegible]

[illegible]

185 South Fifth Street, Philadelphia;
15 Sept. 1879.

Wm. Bucher Esq.
No. 321 Geary Street,
San Francisco.

My dear Sir:

The bearer of this is my friend Mr. Edward R. Hart, lately of Cambridge near Boston. He came home last Summer from three years' study in the mining schools at Freiberg and Paris, has had some practical experience since that as a rolling mill superintendent in Ohio, and has now gone to seek his fortune in California.

If you could perhaps tell him of any opening, or put him on the track of finding one, or show him any other kindness, you would not only do him a favor, but would very greatly oblige

Yours very truly,
Benj. Smith Lyman.

708 Locust Street, Philadelphia,
15 Sept. 18[illegible].

Wm. [illegible] Esq.,
No. [illegible] [illegible] Street,
San Francisco.

My dear Sir:

The bearer of this is my friend Mr. Edward R. [illegible], lately of [illegible] near Boston. He has since had business from three years study in the mining schools at Freiberg and Paris, has had some practical experience since that as a mining [illegible] superintendent in Ohio, and has now gone to seek his fortune in California.

If you could perhaps tell him of any opening, or put him on the track of finding one, or otherwise any other kindness, you would not only do him a favor, but would very greatly oblige yours very truly,

Benj. Smith Lyman.

[illegible] Street, Philadelphia, [illegible]

[illegible] San Francisco.

Dear Edward:

[illegible] which has come duly to hand, [illegible] quite [illegible] and [illegible] were notifying [illegible] California [illegible]. I trust you may be [illegible] and we have nobody [illegible] please [illegible] find in your letter the name [illegible] San Francisco, and [illegible] also [illegible] if he be in San Francisco, [illegible] They are not [illegible] mention the name of [illegible] acquainted with him, and I send [illegible] introduction to him. He is a very [illegible] please remember me [illegible] them [illegible] and give his house address [illegible] young woman, [illegible] please give her my [illegible]

[illegible] seems [illegible] as still [illegible] when you were here last winter. There was a little doing early [illegible] it was done [illegible] in putting [illegible] for [illegible].

Will you tell [illegible] I have found in [illegible] page 73 in the example [illegible] the length of [illegible] 83 [illegible] 10.77. I have [illegible] in which [illegible] you [illegible].

[illegible] with a telescope [illegible] by Jones [illegible]

[illegible] I remain [illegible]

135 South Fifth Street, Philadelphia, 18 Sept. 1859.

Marshall Bowman Esq.

Sydney, Cape Breton.

Dear Sir:

Your favor of the thirtieth of last month is at hand with the criticism of Dr. Dawson and Mr. Moseley, which [illegible] herewith, as [illegible].

If my memory serves me right, the geological facts are [illegible] you say, well enough; except that the thin coals No. [illegible] No. 28 may really exist as Moseley reports, for I think we [illegible] believe of one or two quite thin coals [illegible] and [illegible] far perhaps from the place he gives it [illegible]. They [illegible] cliff along the north side of Mire Bay near [illegible] the mainland. The biggest coal No. 29 would also be [illegible] if it existed at all. — Still, I can hardly recommend your publishing your criticism. Is it not perhaps, not merely [illegible] but rather harsh?

Hoping that business in Cape Breton may come up to your [illegible] next year, I remain

Yours truly,

Benj. Smith Lyman.

236

135 South Fifth Street, Philadelphia, 18th Sept. 1859.

Marshall [illegible] Esq.
Sydney, Cape Breton.

Dear Sir:

Your favor of the thirtieth of last month is at hand [illegible]

[illegible]

If my memory serves me right, the geological facts you [illegible] are very well brought; except that the [illegible]

[illegible]

Hoping that business in Cape Breton may come up again [illegible]

[illegible]

Yours Truly,
Benj. Smith Lyman.

85 South 15th Street, Philadelphia; 16 Sept. 1867.

My dear Sanborn:

The other day, on a piece of paper that came around a bundle, I came across the enclosed advertisement of a school soon to be opened by the Misses Mansfield at No. 4783 Main Street, Germantown. From the references given, so many of them Concord men, I thought it might be the young ladies who entered your school just after I left Concord, and one of whom I had the pleasure of meeting there two or three years ago. If it be really they, I should be very glad to renew my acquaintance with her and to make the acquaintance of her sister. Two young ladies so highly praised as these Concord men would be quite an acquisition to Philadelphia. It is often hard work to get started here as a school teacher, as things go so by fashion here that when a reputation is once established in school keeping the school is overrun with applicants. The late Dr. Cleveland is said to have [illegible] but two pupils in his school here for several months at the start, and to have turned away many of them.

The schools have all been reopening this week, and people are getting back to town. I followed some of your summer rambles by your letters to the Republican, and [illegible] your letter from Prairie [illegible] [illegible] I appreciated your joke of [illegible] forth instead of [illegible] and the letters from [illegible] at the time of the [illegible] [illegible] [illegible] [illegible] of the [illegible]

No. [illegible] Street, Philadelphia, Sept [illegible]

My dear Grandson:

The other day on a piece of paper that came around a bundle, I came across the enclosed advertisement of a school [illegible] by the Misses Mansfield at No. 173 [illegible] Street, Germantown. Among the references given are many of the Concord men. I thought it might be the young ladies [illegible] your school just after I left Concord, and one of whom I recall the pleasure of meeting there two or three years ago. If it be really they I should be very glad to renew the acquaintance with [illegible] and to make the acquaintance of [illegible] sister. Two young ladies so highly praised as these [illegible] would be quite an acquisition to Philadelphia. [illegible] a school teacher, [illegible] fashion [illegible] that when a reputation [illegible] established in Philadelphia the school increases with [illegible]. The late Dr. [illegible] is said to have [illegible] his school [illegible] for several months at the [illegible] and turned away many of them.

The [illegible] all the [illegible] this week, and people are getting back to town. [illegible] by your letter [illegible], and [illegible] your letter from [illegible] [illegible]

tised your commendation of Agassiz's military treatment, as chairman of the [illegible], and though I was well enough satisfied with the main results I could not agree with you in approving of the way in which it was conducted. It seems to me that the [illegible] Committee ought to look at the papers or abstracts of them before they are read, as the Constitution and the Laws require, and to reject those that are unfit to take up the time of the meeting. It is neither agreeable to the Chairman nor to the author to have it managed as Agassiz managed that affair, and it takes up more of the time of the meeting than it would do if managed the other way.

We had quite a Humboldt celebration here last Monday and Tuesday. Tuesday evening there was a concert and speechmaking in German and English in the Musical Fund Hall, and the whole was, it is said, a complete failure in every respect. On Monday morning they laid the cornerstone for a monument in Fairmount Park with the help of the Masonic order. There was a great number of people out there, but only very few could get a sight of the ceremonies, because they took place on the top of a hill, and those who stood in the front ranks hid every thing from those who stood behind. There was also a speech in German there and a short one in English, with parade. But the great event was the Volksfest at Engel and Wolf's Farm, a large beer garden, out beyond the park. The place was very full of folks and they were very festive. Very many both here and in the park seemed ~~[illegible]~~ to have very little knowledge of Humboldt, but were determined to have a good time in the fine weather. Among the rest I found some four or five of our Academy members, and we cordially united in disgracing that and one or two other learned societies represented there as far as we could by our carryings on.

I suppose you are as much overcome with work as ever. Do you live in the same house this year as last? I was glad when [illegible] Hampton the other day that Mr. [illegible] said he had had a very [illegible] of the [illegible]; and I am very much obliged to you for it. He is a [illegible], I understand, [illegible] as you see [illegible] [illegible] [illegible].

[illegible]

135 South Fifth Street, Philadelphia, 19 Sept. [illegible]

Dear Mary:

Your account in your favor of last Wednesday of the parties, rides and other doings at Northampton is very interesting. The summer is so lively and gay that the winter will seem dull in comparison; no wonder those who can try to spend a part of the winter in [illegible]. The city here is dull enough through the summer, and the return of the summer [?] pleasures has just begun to enliven it again. The theatres are reopened and other public entertainments have begun to take place again. The active politicians are beginning the hard work of their election campaign for the election of next month, and the streets are now and then brilliant at night with torch light processions, and there are meetings and speeches almost nightly. The horticulturists and [illegible] growers (or pomologists as they prefer to call themselves) have this week had a great exhibition of fruit in the Horticultural Hall. They wound up with a grand reception on Friday evening to which the [illegible] had a couple of tickets through the kindness of Mr. Elwyn [?] by one of [illegible] (costing [illegible]) and they asked me to [illegible]. The hall was handsomely trimmed [illegible] and the tables [illegible] fruit and oysters [illegible] and [illegible] eatables. After [illegible] dancing was [illegible] in the main floor where the tables were [illegible]

[illegible], Philadelphia, [illegible]

Dear Harry:

Your account in your favor of last Wednesday [illegible] doings at Northampton [illegible]

[illegible]

ladies were seated on benches along the sides of the room. [illegible] the attack upon the [illegible] began, and [illegible] [illegible] from the [illegible] quick motion; such scrambling [illegible] good feelings! As I had but lately eaten a comfortable [illegible] I was not so hungry as the rest seemed to be. After [illegible] [illegible] [illegible] I was presented with a little basket of fruit [illegible] [illegible], [illegible] the men grabbed as many of them as they [illegible], [illegible] however only one for each lady they had in the [illegible] [illegible] intermingled at the [illegible] [illegible] [illegible]. Altogether the [illegible] [illegible] and [illegible] [illegible], although [illegible] [illegible] as a [illegible], although [illegible] five dollars apiece; but there were probably a great [illegible] [illegible] [illegible] to take a [illegible] in the [illegible].

This morning I [illegible] got out of bed at a late hour (late [illegible]) [illegible] [illegible] I then [illegible] the [illegible] [illegible] at my door. He and [illegible] [illegible] at one o'clock. I [illegible] [illegible] [illegible] [illegible] named Rock or Rocker [illegible] [illegible] in good health, as did also his wife, and as [illegible] [illegible] me pretty well with vegetables and [illegible] [illegible] without my breakfast, as so late a [illegible] combined with the dinner, [illegible] [illegible] and the consequence is that I have [illegible] [illegible] [illegible]. [illegible] is still on Long Island. [illegible] [illegible] sail in the [illegible] [illegible] [illegible] a fortnight or [illegible] they had been expecting [illegible] of [illegible] [illegible] family [illegible] lately [illegible] [illegible] [illegible] Parish [illegible] [illegible] [illegible] old. [illegible] at 108 [illegible] Street, [illegible] [illegible] Parish [illegible] [illegible] [illegible] [illegible].

I [illegible] [illegible] to go [illegible] [illegible] [illegible] [illegible] Montreal [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] Island. [illegible] [illegible]

25 North Fifth Street, Philadelphia; 19 Sept. 1869.

Warren Delano Esq.

No. 57 Broadway, N. York.

My dear Sir:

I agreed yesterday to set out day after tomorrow Tuesday for [illegible], to be gone two or three weeks possibly longer. If you consider it important, however, that I should be here on Thursday so as to help elect a director in Mr. Dotterer's place, it is quite possible that the journey may be delayed until Friday. In that case, please telegraph me tomorrow, and I will see if it can be arranged so. I shall try to see you at any rate in New York on Tuesday, and will take on with me the balance of money left by you in my hands, as you may wish to use it before I come back.

It is still possible that I may not go to New York until Wednesday, and also barely possible that the whole trip beyond there may fall through altogether.

Two writs have been served upon me summoning the Union Car Company to appear in court the third Monday of September to answer claims made by your brother and by J. J. Badger. Of course I shall make no appearance, though I know nothing about the details of Mr. Badger's claims. Probably the brother has seen that that is all right. Very truly yours, Benj Smith Lyman.

[illegible] Eighth Street Philadelphia, Sept. [illegible]

[illegible] Adams Esq.
No. 57 Broadway, N. York.

My dear Sir:

I expected yesterday to start day after tomorrow Sunday, for [illegible], to be gone two or three weeks, possibly longer. If you consider it important, however, that I should be here on Tuesday, so as to help elect a Trustee in the [illegible] place, it is quite probable that the journey may be delayed until [illegible]. In that case, please telegraph me tomorrow, and I will see if it can be arranged so. I shall try to see you anyway, early in New York on Tuesday, and will take on with me the [illegible] left by you in my hands, as you may wish to see it before I leave [illegible].

It is still possible that [illegible] may go to New York Wednesday, and [illegible] possible that [illegible] may [illegible] altogether.

The [illegible] has been placed upon me [illegible] the [illegible] Gas Company [illegible] in [illegible] the Third [illegible] Treasurer claims made by you [illegible] and [illegible]. Of course I shall make no appearance, [illegible] I know nothing about the details of the [illegible] claim. Probably the [illegible] that is all right. Very truly yours, [illegible]

[illegible] Street, Philadelphia, [illegible]

Messrs. [illegible] Smith & Co.
[illegible]

Gentlemen:

Please [illegible] send [illegible] the following [illegible]
[illegible] for one year [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

Very respectfully yours,

[illegible] Lyman.

Montreal; 2 October, 1869.

To Mr. Bosler,
Letter Carrier for Fifth & Walnut Sts. Philadelphia —

Dear Sir:
Please not forward my mail matter any longer to this place, but deliver it at No. 135 South Fifth Street.

Respectfully yours,
Benj: Smith Lyman.

Montreal, 2 October, 1869.

T. W. [illegible],
Letter Carrier for Fifth Ward [illegible]

Dear Sir: Please not forward my mail matter any longer
this firm, [illegible] at No. 137 North Fifth Street.

Respectfully yours.

Benj: Smith [illegible]

Montreal, Canada: 21 Oct. 1869.

My dear Sanborn:

Your favor of the ~~twenty eighth~~ of last month with
Bliss's letter enclosed only came to hand on my arrival here yesterday.
I am delighted [illegible] you [illegible] on again, and am greatly obliged
to you for your kindness in writing to Bliss about me. I can
[illegible] tell you [illegible] it would suit me to accept the invitation
[illegible] if [illegible] it should really be given; but perhaps I can
after my getting home to Philadelphia. On some accounts I [illegible]
[illegible] is not altogether [illegible]. As for
the [illegible] far more of it than I want already, for
you must know it is a [illegible] among many people to call any gentleman
a professor, and I [illegible] to it in some journeys [illegible],
&c. Perhaps the infliction might be more tolerable if I were [illegible]
the actual holding of a professorship; as it is, it is extremely annoying:
"Professor, do you think so and so?" "Professor, this; and "Professor, that.
[illegible] these parts they have [illegible] without such ways. As for the Illinois
Industrial School I had [illegible] heard of it before except from Mr. [illegible]
[illegible] who wrote a [illegible] ago "I paid a visit to the Illinois [illegible]
Industrial University at Champaign: it is a grand idea which I hope I'll be
allowed to collect [illegible] in the future, by lecturing sometime on the history
of industrial civilization." [illegible] point I should prefer a professorship
of geology or of [illegible] might perhaps have a professorship of
[illegible] that would be useful to me [illegible]
[illegible] prefer going [illegible]. My business prospects took a
[illegible] just now [illegible] will amount to is not [illegible]. —
[illegible] wrote from Chicago on his way to Madison, [illegible] of
the pleasure he had had in meeting you and of your kindness to him
[illegible]: When you write to your friend, tell him my best regards, I will [illegible]

him from Boston [illegible] I [illegible] painter.[illegible] He [illegible] painting
[illegible] [illegible] month [illegible] you have seen him already. He gave
[illegible] address [illegible] [illegible], [illegible] [illegible] [illegible] [illegible] [illegible] his journey, and
[illegible] and [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] in New York [illegible] [illegible] &c [illegible] [illegible] [illegible] you have been [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] in future [illegible] [illegible] Philad[a]. I [illegible]
[illegible] republican [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] the end of the
the publisher in [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] the address [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] I left Philadelphia a little over
[illegible] [illegible], spent [illegible] [illegible] [illegible] [illegible] and [illegible] at [illegible] and [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] the [illegible]
[illegible] du Loup. [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] York, [illegible]
[illegible] [illegible] [illegible] [illegible] in a little [illegible] [illegible] and sailed down the
[illegible] [illegible] [illegible] [illegible] some forty miles [illegible] [illegible] and after
[illegible] [illegible] [illegible] [illegible] fifteen to twenty miles [illegible] [illegible] [illegible],
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible], and visited [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] Bay and on the St. [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] afternoon [illegible] Rivière du Loup
[illegible] [illegible] [illegible] [illegible], [illegible] [illegible] [illegible] [illegible] [illegible] a day in Que-
bec [illegible]. The [illegible] [illegible] [illegible] [illegible] [illegible] and in some respects
very [illegible] [illegible], but on the whole very interesting [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] kind of life and new people we [illegible]
[illegible] [illegible] [illegible] [illegible]. The people [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] French, although many [illegible]
[illegible] [illegible] English [illegible]. At the places we [illegible] at [illegible]
[illegible] [illegible] population was [illegible] scattered except at the village of
[illegible]. [illegible] St. Margaret's River one [illegible] family of [illegible]
father, [illegible] children and grandchildren, [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] and twenty [illegible] miles off [illegible]
[illegible], and [illegible] [illegible] [illegible] [illegible] [illegible]: While we [illegible] [illegible] [illegible] [illegible]
young men of the family [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] River. They [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] and [illegible] [illegible] [illegible]
[illegible], [illegible] flour, [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. The [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]. But I must write again [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] as [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]

Montreal, Canada, 21 Oct. 1869.

R. D. Wood Esq.

No. 400 Chestnut St. Philada.

My dear Sir:

As you may perhaps be impatient [to learn] the results of my trip to the Lower St. Lawrence, and as I may not reach Philadelphia until next Monday or Tuesday, I take this opportunity of saying that Mr. Vigier, Genl. Averill and I got back here safely yesterday after visiting the point on the North Shore of the St. Lawrence near the Pointe St. Charles which you sent me to examine. The ore there proved to be magnetic iron ore apparently quite pure, but so thinly sprinkled through the rock as to be unquestionably quite too poor to work. It occurs in large fissure veins made up almost wholly of a reddish feldspar and is scattered through this vein rock in little balls or crystals as large as the fist or less; in a very few places thickly enough scattered for a couple of feet to be worth working. Mr. Vigier's impression had been that this ore indicated the probability of a much richer deposit below; but there is no reason to suppose that it would grow richer below any more than poorer. Indeed, ...

along the ore at many different levels through a distance of some four miles and some of the richest points were at the higher levels. But throughout all that distance the vein (mining) retained its general character very fully and a dozen cubic yards of it in one place would not differ much in richness from the same bulk in any other, and there is not the least reason to believe that there would be any greater difference in digging downwards. It is but just to Mr. Viger to say that from the moment he learned from me here four weeks ago, that the vein was not at all likely to grow richer in descending, he thought it was useless to visit the place; but Genl. Averill thought otherwise. — I can give you a more formal and fuller report on my return to Philadelphia, if you wish.

We spent but twenty four hours at that place, but I was taken to visit a large bed of ore at Seven Islands Bay, and one on the St. Margaret River as well as to the Moisie Iron works. These ores are strongly attracted by the magnet and seem to be pure magnetic iron ore, indeed that at St. Margaret's River is a loadstone; but it has been said that the ore of Seven Islands Bay (or rather of [illegible] River one mile above its mouth in the bay) contains titanium in injurious quantity. I have samples of both that will serve for analyzing if you should desire it.

We were much delayed on the journey in our wretched little schooner by gales and calms. — I start homeward today, but shall stop in [illegible] a few hours at Col. Henry's as requested [illegible].

Very truly yours. Benj. Smith Lyman

[illegible]

[illegible] Philadelphia [illegible]

[illegible]

[illegible]

[illegible] before [illegible]

[illegible]

— A few minutes after I [illegible]

[illegible]

[illegible] with him.

[illegible] me cordially and [illegible] until [illegible]

[illegible] through Williamsport [illegible] New York, or on her way [illegible] as well as the place where [illegible].

[illegible] and a [illegible]

[illegible] or so after [illegible] in the [illegible]

[illegible] present [illegible] and another visitor [illegible] acquainted. Mr. [illegible] by a Yankee, and [illegible] lived in Charlestown [illegible] a [illegible] threatened [illegible] Lyman if he did not get well [illegible] [illegible] such circumstances. At the time [illegible] Montreal not only was Mr. [illegible] [illegible] Mrs. Lyman [illegible] anxious to make my visit as [illegible] possible. They took me to drive to the cemetery [illegible]. At the cemetery among [illegible] Mr. Lyman's son Frank who had [illegible] before [illegible] occupied much [illegible] In urging me to go to his house in the [illegible] Lyman [illegible] that they were all alone [illegible] if I would come. He [illegible] in his carriage to my hotel the first evening [illegible] I had come, to [illegible] did not succeed [illegible] will probably be here in [illegible] I shall not however be able [illegible] take them to my house, [illegible] Montreal Mr. Theodore Lyman [illegible] I saw there not only his amiable wife [illegible] who was much [illegible] [illegible] a railroad [illegible] the steamboat was [illegible] Lachine [illegible] Harry to the [illegible] all before [illegible] Lyman [illegible] Montreal [illegible] the [illegible] with no [illegible] [illegible] and [illegible] [illegible] more [illegible] [illegible] passed [illegible] in another [illegible] and [illegible] [illegible] me [illegible]. I had not before [illegible] thought of her being in Montreal and could not [illegible] before [illegible] and [illegible] Montreal [illegible] in the [illegible]. I was much [illegible] the [illegible] I had had any expectation of being [illegible] the French cities in North America. I was [illegible] the [illegible] of the French

[illegible] of the [illegible]. Almost all the poorer people seemed to be French
and a considerable [illegible] richer; it [illegible] as if two thirds
[illegible] were French, but they said only about one third. They
[illegible] about [illegible] and fifty thousand for the population
[illegible] City, but it [illegible] not strike you as so large. — Thursday after-
noon I left Montreal by the cars and went [illegible] evening to [illegible]
[illegible] by way of [illegible] where the train is ferried across the [illegible]
[illegible]. It was nearly eight when I reached Plattsburgh, and I
[illegible] some after [illegible], to sleep. In the morning
[illegible] through the little town [illegible] breakfast
[illegible] the steamboat for Port Henry, where
I arrived at noon. The trip was a charming one, the weather was
[illegible] but rather too cool [illegible] with comfort on the deck; and
the autumn leaves were just in their prime of beauty. The
scenery must be very fine at any season, but at this time
[illegible] very magnificent [illegible] delighted that I had taken pains
[illegible] by daylight. The lake in the northern part is pretty wide so
[illegible] one shore can be seen very closely at a time, but there are
[illegible] that break up the surface and give variety [illegible]. All the
[illegible] the [illegible] Mountains on the west look wild and
[illegible] while the low [illegible] lands of Vermont on the [illegible]
[illegible] and charming as possible. I spent twenty four hours
[illegible] for the purpose of seeing the iron furnaces and mines
[illegible] more especially [illegible] the iron ore beds I had
[illegible] in Canada. The next day, Saturday, was rainy and
[illegible] scenery was made less pleasing thereby, but in the southern
part of the lake between Port Henry and Whitehall the shores are
near together so that we could see [illegible] well and in spite
[illegible] the views were lovely and the leaves brilliant. We stopped
for a minute at Ticonderoga, but I did not land. At Whitehall I
left the boat and took the train for Albany by way of Saratoga.
It was dark before we got to Saratoga but I had some glimpses of
the streets and [illegible] as we passed through. I slept at the
Delavan House, and took a train about half past ten the next morning
[illegible] New [illegible]. All the way from Montreal and [illegible]
[illegible] I had [illegible] with the good [illegible] and
[illegible] of conductors [illegible] only after leaving [illegible]
[illegible] I had the first [illegible] word from a [illegible] and was [illegible] it.

I walked up from the Newburgh ferry to Algonac and arrived there before the others, just as they were getting through dinner. Stayed there until early Tuesday morning and came down to New York with Mr. Delano. My visit was a very pleasant one. Miss Sarah [illegible] was the only visitor there, except [illegible] Sunday Afternoon a [illegible] from the [illegible] who [illegible]. The painters are still there and [illegible] finish in a week or [illegible]. The [illegible] finished [illegible] a sitting room [illegible]. The children and all the rest seemed in as good [illegible] as ever. [illegible] out [illegible] but that was [illegible] are [illegible] I saw last since [illegible] the two little [illegible] as happy as ever [illegible] are growing fast. Aunt Katy seemed very well, [illegible] Church. [illegible] and I and [illegible] to [illegible] Sunday morning and [illegible] the Cemetery looking very [illegible] and the weather bright and clear. I had never been [illegible] but once before, a few years ago. We went by a new road along near the [illegible] all the way, and came back by the old road. Aunt Katy told me of [illegible] in the papers the announcement of the death at Stockholm of [illegible] 13 September [illegible] in New York [illegible] take pains to go and see Richard [illegible]. You have probably heard about it however from the [illegible]. It was a very unexpected attack of [illegible] and a very sudden and heavy loss to his family. Richard was expecting his mother and [illegible] by the steamer [illegible]. I saw Uncle Edward a few minutes at his Counting room, and found him well. He said they were all well at home, but very busily occupied in getting their house [illegible]. So I did not stay to go over there, but came here this [illegible] afternoon. [illegible] found [illegible] most comfortably established in their new house three doors below their old one in [illegible]. The house is a little wider [illegible] and the [illegible] handsomer. The [illegible] are also well and [illegible] ——— Mr. [illegible] in a letter [illegible] in [illegible]. [illegible] give my love to all. Your affectionate son Benj. Muhlenberg

[illegible]

125 South Fifth Street, Philadelphia; 28 Oct. 1839.

My dear Mr. [illegible]:

Your very kind favor of the fifteenth of last month came to hand just as I was setting [illegible] on a journey from which I got back two days ago, and I have had until now no convenient opportunity of answering. And now I hardly know whether [illegible] necessary, for you speak of coming east this way and the [illegible] Science meeting in New York seems to me [illegible] already instead of [illegible] place next month as I understood from you it would. As I am [illegible] that you were so well pleased with my brother's pamphlet, and that you wish [illegible] [illegible] [illegible] he is past, I am sure, he will be glad [illegible] you; and if I knew where you could be found [illegible] [illegible]. As it is, I will enclose herewith a letter introducing you to him, so that if you find it convenient to [illegible] Twelve [illegible] this side [illegible] you will have no difficulty in making his acquaintance. — If you are at the [illegible] Science meeting, as I suppose, you have probably met Mr. [illegible] again; in that case he will be pleased, I know from what he has written since seeing you. He is a [illegible] [illegible]. — I thank you very much for the kind words you say about my surveying apparatus. I do not [illegible] [illegible] about it at Northampton or [illegible], I could scarcely have given you any idea of the [illegible] I must have been inventing this summer

123 South Fifth Street, Philadelphia; 28 Oct. 1857.

My dear Mr. [illegible]

Your very kind favor of the fifteenth of [illegible] came to hand [illegible] which I [illegible] days ago, and I have had until now no convenient opportunity of answering. And now I hardly [illegible]

[illegible]

[illegible] for I have [illegible] written [illegible] to them in the [illegible] as it is so entirely out of their line that they would hardly [illegible] in my description of it. As the instrument is [illegible] it is to [illegible] position [illegible] perspective [illegible] makes [illegible] have [illegible] it speaks very [illegible]. — I suppose that Mr. [illegible] is still [illegible]. His [illegible] at the [illegible] was not very great, it is [illegible] it was better than nothing, and his position enabled [illegible] to earn his living, and [illegible] some time to learn English [illegible] to become acquainted with the way of doing work in [illegible] region. So that I [illegible] on the whole [illegible] for him [illegible] in until [illegible] something [illegible].

[illegible] has been [illegible] which I had [illegible] through [illegible] Quebec to the [illegible] miles [illegible] has been a [illegible]. The [illegible] in the geology [illegible] and the [illegible] Montreal [illegible] I had expected [illegible] Quebec is [illegible], and the [illegible] wholly [illegible]. The [illegible] I visited [illegible] and [illegible]. The railroad [illegible] there we were [illegible] a [illegible] of [illegible], and as it was [illegible] about. My [illegible] and a Montreal lawyer. [illegible] indeed.

[illegible] Smith Lyman.

[illegible] Street, Philadelphia;
[illegible] Oct. [illegible]

Dear James:

The bearer of this is my particular friend Mr. Felix Fournier, lately of Paris, but now an inhabitant of Wisconsin. He is a civil engineer by profession, but has much general information, and you will find him a most agreeable gentleman. You will no doubt be especially pleased with his views in regard to French politics, as your pamphlet in France has already interested him. Any attention that you may be able to show him will be esteemed as an especial favor by

Your affectionate brother.

Benj: Smith Lyman.

255

708 Locust Street, Philadelphia,
Oct. 1st. 18[illegible]

Dear James:

The bearer of this is my particular friend Mr. Philip Fouché, late of Paris, but now an inhabitant of Philadelphia. He is a civil engineer by profession, but has much general information, and you will find him a most agreeable gentleman. You will no doubt be sufficiently pleased with his views in regard to French politics, as your propaganda in France has already interested him. Any attention that you may be able to show him will be esteemed as one especially given to

Your affectionate brother,

Benj. Smith Lyman.

13 North Eighth Street, Philadelphia, 29 [illegible]

Dear [illegible]:

My friend M. [illegible], author of [illegible] travail, an interesting [illegible] work on the history of industrial labor, came last summer from France to live in America and is settled in Wilmington. You may have heard of his [illegible]

[illegible] Wilmington [illegible] he read your pamphlet on [illegible] and he wrote one from Chicago [illegible] [illegible] in Wilmington your [illegible] pamphlet on the [illegible] "I have never in my life [illegible] with such [illegible] [illegible] that [illegible] to [illegible], the [illegible] [illegible] [illegible] [illegible] civilization is a [illegible] [illegible] philosophical [illegible] upon the subject. [illegible] [illegible] [illegible] [illegible], he would [illegible] [illegible] [illegible] in [illegible], as I agree entirely with [illegible] [illegible] [illegible]" He is probably in New York now with [illegible] [illegible] [illegible] [illegible] but as I do not know [illegible] [illegible] I [illegible] ask you to call on him. I [illegible] [illegible] of sending him a letter [illegible] [illegible] for you. [illegible] certainly take pleasure in [illegible] the acquaintance of one who is so much interested in your [illegible]. You will find him, too, a very agreeable gentleman of much general information.

Hoping to see you at [illegible] on Thanksgiving day, I am

Your affectionate brother,

Benj. Smith [illegible]

135 South Fifth Street, Philadelphia. 29 Oct. 1869.

C. C. Gordon Esq.
New York.

My dear Sir:

Your favor of yesterday is at hand. — At Mr. Lex's office I learned in his absence from Mr. Pauly that he had received from Mr. Thomas the contract of the European & N. American Railway Company, and that Mr. Grummey had consented to have a copy made of the deed of apportionment. — Mr. R. C. Thomas is unwilling, he says to me, to let the books of our company go out of his hands until he receives from you and me as auditing committee a certificate in writing that we are satisfied with his account. The company is engaging in so much litigation that he thinks this proper to secure himself against any difficulty in the future, and his request strikes me I confess as not unreasonable. He says however that he suggested such a course to you in a letter some days ago. Perhaps his mistake in crediting certain sums to Mr. Powers that should have been credited to Mr. Delano may be reason enough for withholding such a certificate until he corrects the mistake. But his resignation might be accepted by a new meeting of stockholders or directors, as the case may be, upon our report, such as it is, and the mistake corrected afterward. As the matter stands, unless we give a certificate Thomas will have nothing to show that he is not still Secretary and responsible for the books, until our report shall be made and recorded at the next meeting. — He showed me an account of Mr. Powers in which it appears that Mr. Powers paid the Pavel ground rents of July 1868 and of Oct. 1868 and was reimbursed therefor by Mr. Thomas, that is by the company. Thomas also says that Grummey told him the other day that one of these instalments was paid twice, by you as well as by Powers, but I fancy this is a mistake, as your payment may have been for January and April, 1869. I have been to Mr. Morris's office, but found no one there, and will go again. Thomas says he never paid any of the ground rents directly.

Since writing the foregoing I have been a second time to Mr. Dotterer's house in 41st Street and succeeded in finding him. He says it is now impossible for him to sell the timber, as he was getting ready to do; for the Sheriff yesterday [illegible] the personal property [illegible] to satisfy the claim of H. H. Delano. Dotterer says the [illegible] very much dissatisfied [illegible] and were for leaving today, but he persuaded them to [illegible],

135 South Sixth Street, Philadelphia, 29 Oct: 18[illegible]

C. P. Gordon Esq.
New York.

My dear Sir:

Your favor of yesterday is at hand. — As Mr. [illegible] claimed in his absence from Mr. Barclay that he had received from Mr. [illegible] a Contract of the [illegible] American Railway Company, and that Mr. [illegible] had [illegible] There is a Copy made of the Philadelphia Agreement. — Mr. R. C. Turner is unwilling, he says, to deliver the books of the Company [illegible] until he receives from you and the [illegible] Committee a certificate in writing that [illegible] with his accounts. The Company is engaging in [illegible] litigation [illegible]

[illegible]

in making himself personally liable to them for their wages. He says that something like a hundred dollars are owing to them in spite of their having been paid seventy five dollars since the time of selling the iron. He is highly indignant at this move of Mr. Delano's and intimated that others could play the same game meaning probably himself. He says that the last freight car went on Saturday to Long Island and the ones that Mr. Brown had bought went at the same time. Mr. Dottner seemed to have had an interview with Mr. Grimmer since the writ of attachment was served.

Very truly yours.

Benj. Smith Lyman.

[illegible] Street, Philadelphia, [illegible]

[illegible] Esq.

New York.

My dear Sir:

[illegible] called the same afternoon on Mr. [illegible] for the books and papers, and [illegible] him just leaving his office, and he answered he would [illegible] afternoon, he [illegible] very busy indeed [illegible] again yesterday, it proved advisable [illegible] books, and that would [illegible] to day and I send you [illegible] the [illegible] he gave me together with [illegible] Company of the [illegible] several insurance policies [illegible] of [illegible] all [illegible] Offices. The [illegible] remains in the office. [illegible] because I have [illegible] I have it [illegible] may be here for it if you wish [illegible] might be put in the office at the [illegible] personal property under [illegible] showed me the certificate you [illegible] committee with his accounts, [illegible] so that he is now no longer Secretary. — I have been [illegible] finding him, and [illegible] about the payment [illegible] I wrote you a letter [illegible] eighth, [illegible] you [illegible] writing [illegible] told you that all the personal property [illegible] were under [illegible] and therefore [illegible] Mr. [illegible] at his house and [illegible] prevents the removal of [illegible]

Very truly yours, [illegible]

[illegible]

C. C. [illegible] Esq.
New York.

My dear Sir:

[illegible]

135 South 4th St. — Philadelphia, 4 Nov. 1889.

C. C. Gordon Esq.

[illegible]

My dear Sir:

Your [illegible] is at hand. — The books and papers that [illegible], were all sent to you by express yesterday. The [illegible] [illegible] [illegible] [illegible] to the [illegible] of the [illegible] came within — It was not a [illegible] [illegible] that Mr. [illegible] and [illegible] [illegible] [illegible] talking, with [illegible] since the writ of attachment was [illegible]; for he quoted Mr. [illegible] distinctly in [illegible] [illegible] [illegible], to this effect: "Mr. Gummey says Mr. Delano [illegible] [illegible] of the attachment for he was already [illegible] by a judgment."

Very truly yours,

Benj. Smith Lyman.

135 South Fifth Street, Philadelphia: 4 Dec. 89.

Gen. Wm. W. Averell,
New York.

My dear Sir:

The cost of getting iron ores analyzed by my friend of whom I spoke to you would be, I find, twenty five dollars for each ore, that is, for each complete analysis, no matter how many bodies may be determined.

The cost of a report by me upon the Rapid River and St. Margaret's River ore beds that we visited would be a hundred dollars. Mr. Wood has not yet decided to order such a report on his own account.

Hoping to have the pleasure of seeing you here within a few days, I remain

Very truly yours.

Benj. Smith Lyman.

[illegible] Philadelphia [illegible]

Dear [illegible]:

[illegible]

[illegible] getting on [illegible]

[illegible]

having heard nothing from him, I [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] been [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] — the [illegible] [illegible] [illegible] called [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] at this [illegible] [illegible]
[illegible] [illegible] [illegible], it [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]. So I [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] kindness [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] until [illegible]
breakfast [illegible] morning, and [illegible] a very [illegible]
visit. Very agreeable [illegible], but then they were quite [illegible]
[illegible] [illegible] [illegible] [illegible] and [illegible]. [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]. They assured me that they
[illegible] [illegible] [illegible] [illegible]; [illegible] [illegible] the [illegible] of
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] time [illegible] from
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] would be [illegible]
[illegible] [illegible] [illegible] [illegible] properly organized for
[illegible] [illegible] [illegible] [illegible] would be almost [illegible]
[illegible] arrangement [illegible] [illegible], office and [illegible]
[illegible] all in one and [illegible] [illegible], [illegible] [illegible] [illegible];
[illegible], comfort and convenience [illegible] [illegible] [illegible]
[illegible] [illegible], and [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible], — [illegible] little [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]. I [illegible] Saturday evening [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. They are
[illegible] [illegible] [illegible] [illegible]. [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] and [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
— [illegible] [illegible] [illegible] [illegible] all [illegible] and they are [illegible] [illegible].
I am expecting [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] affectionate [illegible]. [illegible]

135 South Fifth Street, Philadelphia; 5 Nov. 1869.

J. C. Martin Esq.

[illegible]

My dear Sir:

Your favor of [illegible] is at hand. — Mr. Lyp told me this morning that [illegible] you that he would attend to the matter you intimated [illegible] and would write you about it, [illegible] the [illegible]. He [illegible] think of carefully the law point about the machinery, but says that the machinery is mentioned in the mortgage, and [illegible] cases where the machinery [illegible] was declared a part of the premises have [illegible] the [illegible] by [illegible] [illegible] found [illegible] [illegible] establishments. — I have [illegible] a receipt by Mr. [illegible] [illegible] as one half of the [illegible] groundrents due 1 Apr. 1868 and July [illegible] and 1 Oct. 1868 and [illegible] the [illegible] ground rent due 1 July 1868 together with [illegible] on the same to [illegible] Oct. 1868 and interest on the amount [illegible] up to [illegible] 1869, the date [illegible] receipt. These sums are reckoned up in a letter from A. [illegible] B. B. Thomas, on the back of which letter the [illegible] is written; with J. A. [illegible] [illegible] letter dated 29 Jan 1869 with an account of [illegible] and [illegible] in regard to the same groundrents by which it appears that [illegible] 73.07 (one half [illegible]) was due in addition [illegible] [illegible] [illegible] paid this for he must have done so in satisfying the judgment; he gives no receipt for it here. This receipt may be of service to Mr. Lyp in getting those judgments [illegible] cancelled before [illegible] you [illegible]. The [illegible] two of the [illegible] mentioned in the receipt. — Mr. Thomas says the [illegible] is not [illegible]! Indeed, he seems to [illegible] until a small debt of ninety dollars to a [illegible] maker, [illegible] judgment was obtained, be paid. An appeal was made by Thomas from the Alderman's decision which appeal was lost; but at the time of the appeal [illegible] in double the amount was required, and a personal friend of Thomas's a young man of [illegible] became [illegible] is [illegible]. So Thomas would prefer to keep [illegible] as security until the matter is settled and his friend be released. The [illegible] cost [illegible] [illegible] now as [illegible] as [illegible]. [illegible] with costs is about ninety two [illegible] [illegible] considered by [illegible] and Thomas [illegible] [illegible] none of [illegible] work for which it pays was done by the [illegible]; it was done by others because the [illegible] [illegible] still in [illegible]. The claimant [illegible] Thomas to take [illegible] would [illegible]

Yours truly, [illegible]. Benj: Smith Lyman.

264

[illegible], Philadelphia, 5 Nov. 1859

[illegible] Esq.

My dear Sir:

Your favor of [illegible] is at hand. [illegible]

135 South Fifth Street Philadelphia; 9 Nov. 1869.

C. C. Gordon Esq.
New York.

My dear Sir:

Your favor of the fifth, mailed on the sixth, came to hand day before yesterday, Sunday, afternoon, with the enclosed check for $205, the amount of wages due the watchmen. Yesterday morning I got the check cashed at a broker's, and paid the day watchmen, and in the evening paid the night watchman. Enclosed please find their receipts for the same: P. Cavanagh for ninety dollars; J. McHenry for eighty dollars; and J. R. Dales for thirty five dollars. They were very much pleased to be paid, and seem quite contented and good humored.

I have seen Mr. Lesp this morning, and he says that Mr. Morris told him the matter of cancelling those old judgments would be all right. I left with Mr. Lesp the receipt of Powers that I mentioned to you the other day, as Mr. Lesp seemed to think it desirable ~~that~~ he should have it.

Very truly yours.

Benj. Smith Lyman.

1337 N. Eighth Street Philadelphia; 9 Nov. 1859.

C. C. [illegible] Esq. New York.

My dear Sir:

Three [illegible] of the [illegible] arrived on the night, came to [illegible] yesterday, Sunday afternoon, with the enclosed check for $[illegible] the amount of wages due the watchmen. Yesterday morning 10 [illegible] o'clock I called [illegible], and paid the day watchmen, and in the evening paid the night watchmen. Enclosed please find their receipts for the same: P. [illegible] for ninety dollars; J. McHenry for eighty dollars; and J. H. [illegible] for thirty five dollars. They are very much pleased [illegible] and [illegible] quite contented and [illegible].

I have seen Mr. [illegible] this morning and he says that Mr. [illegible] told him the matter of [illegible] would be all right. I [illegible] the receipt of [illegible] mentioned [illegible] as Mr. [illegible] [illegible] it should [illegible] it.

Very truly yours.

Benj. Frank. [illegible]

35 South Fifth Street, Philadelphia; 10 Nov. '69.

Geo. W. Gordon Esq.
New York.

My dear Sir:

Yours of yesterday is at hand. Enclosed herewith please find the inventory you ask for. You will find in it in pencil some things noticed for the first time at the time of the revision. I would suggest that, in copying the smaller articles, tools and the like movables, be classified a little, even if the larger ones be not; for in making a revisal at a future time this would add very much to the convenience in checking them off, since such things get moved about from one room to another. If all the things of the same kind in the whole establishment were written down in the same place, it would be much easier to find them on the paper when seen in any given room.

Of the eleven hundred dollars that Mr. Delano sent me five hundred and thirty three dollars and ten cents ($533.10) were used to pay off the judgement and twenty five cents to pay the broker's commission for changing the New York check. The balance of $566.65 I returned to Mr. Delano on the 21 Sept. 1869, as I passed through New York at the beginning of my last journey. As I have no money of his or of the company's in my hands, perhaps it would be best for you yourself when you see him to speak to him about paying those seventy or rather ninety dollars due to the sashmaker.

I expect to go to Massachusetts next Tuesday for a week or so.

Very truly yours. Benj. Smith Lyman.

37 North Fifth Street, Philadelphia; 10 Nov. [illegible]

[illegible], Esq.
New York.

My dear Sir:

Your [illegible] of yesterday is at hand. Enclosed I return with pleasure [illegible] you ask for. You will find in it [illegible]

[illegible]

[illegible]

The Moisic Iron Works.

An Account based on information taken on the spot in October, 1869.
By Benjamin Smith Lyman.

The bloomary forge at Moisic is interesting from its being the northernmost iron works on this continent and from its depending for ore on the magnetic iron sand of the sea beach.

The works are at the mouth of the Moisy River on the north shore of the St. Lawrence near its mouth, some seventy miles west of Anticosti Island and fifteen east of Seven Islands Bay, and are in latitude about 50¼° and longitude about 66°. The true spelling of the name Moisy (as seen on old French maps and in the Edits et Ordonnances du Roi) has been corrupted by the fishermen of the coast or [illegible] to Moisie, and the name of Moisic was given by the surveyor [illegible] of the province to the township at the mouth of the river in the [illegible] that it was a good Indian name of the stream. He had the power to name the township; but of course had none to change the name of the river.

The river for a couple of miles just above its mouth is a mile and a half wide and runs towards the southeast; above that it is much narrower and with the same general course is very crooked. This wide part is nearly closed at the mouth by a long dry sand bar running northeast and southwest, the general course of the St. Lawrence; and the eastern part of the basin so formed is very shallow, indeed much of it is bare at low tide. The entrance to the basin from the sea (or rather the St. Lawrence, which is here ~~about~~ seventy miles wide) is at the southern corner, by a narrow channel which has   feet of water at low tide, and the tide here rises ten or twelve feet.

Near the end of the bar on the right going into the basin or harbor is the wharf of the iron works. On the opposite side of the entrance and close by at the same side are two other wharves for fishing vessels. A railroad runs from the wharf a mile and a third along the [illegible] to the iron works at the eastern corner of the basin. At the works are: a [illegible]; a large building for the washing machines, forge fires, hammers, steam engines, boilers, blowing machinery and machine shop; [illegible] charcoal kilns of brick; a charcoal shed; a lime kiln and lime house; a stable and barn; and a brickyard; all clustered together in

(Written for the Engineering and Mining Journal)

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The river for a couple of miles just above its mouth is a mile and a half wide and bends to the southeast; above that it is much narrower and up to the same general course is very crooked. The wide part is nearly closed at the mouth by a long dry sand bar running northeast and southwest, the general course of the St. Lawrence; and the western part of the basin so formed is very shallow, indeed most of it is bare at low tide. The entrance to the basin from the river (or rather the St. Lawrence, which is here about seventy miles wide) is at the western corner, by a narrow channel which has [illegible] feet of water at low tide, and the tide here rises ten or twelve feet.

Near the end of the bar on the right going into the basin or harbor is the village of [illegible]. On the opposite side of the entrance and close by are two other establishments for fishing [illegible] [illegible] from the village a mile and a third along the [illegible] [illegible] at the eastern corner of the basin. At the works are [illegible]: a large building for the rolling machines, forge fires, [illegible], steam engines, boilers, blowing machinery and [illegible]; [illegible] kilns of brick; a charcoal shed; a lime kiln and [illegible]; a stable and barn; and a brickyard; all clustered together; [illegible]

to

near to each other. The village of a dozen houses where the workmen dwell is about a quarter of a mile from the forge building, on the northeast ~~shore~~ of the basin.

There is a landing for wood close by the forge and charcoal kilns. The wood is brought down in summer from some four miles up the Moisy on large scows, fifty or sixty cords to the load. The scows are towed by a small steamtug that draws only three feet of water. In winter the wood is cut nearer to the forge (about two miles now) and hauled to it on the snow, and the wood near the forge is spared in summer for this purpose. It is almost all ~~soft wood~~, resinous wood, but partly birch and the trees are mostly rather small. The chopping is paid for at the rate of fifty cents (specie ~~payment~~) a cord, and the wood is reckoned to cost at the kilns eighty cents a cord. The wood cut up the river belongs properly to the government, but the privilege of cutting it has been granted for the royalty of six cents a cord, which, however, has never yet been exacted.

There are ten charcoal kilns in a row beginning about a hundred yards from ~~the~~ wood landing place; but two of them are unfinished. The eight finished ones are in the shape of a cylinder at bottom, with a dome shaped top. They are about thirty feet in diameter and twenty five feet high; have walls a foot thick; are built each of forty thousand bricks; and will hold a hundred cords of wood a piece, which yields four thousand bushels of charcoal. The two unfinished kilns are to have iron roofs much flatter than the brick domes. Holes are left in the side walls that may be closed with a single brick endwise, to regulate the burning. The charging and emptying are done partly by a round hole at the top below a high wooden platform and partly by a door at the bottom. The burning lasts twenty five or thirty days, say, with the charging and discharging, one month for a burning, or twelve burnings a year with each kiln. The ten kilns would yield, then, about forty thousand bushels a month, or a little more than is needed by four forge fires. The charcoal is of very fine quality much of it very beautiful, enough to make the eyes of a blowpiper glisten. The ten kilns need eight men to load and unload them, two men to watch and a foreman, who oversees other matters too. The charcoal is reckoned to cost in all four cents and a half a bushel. Last year there were only six kilns and some pit charcoal was used.

near to each other. The village of a dozen houses where the workmen dwell is about a quarter of a mile from the forge building, on the northeast shore of the basin.

There is a landing for wood close by the forge and charcoal kilns. The wood is brought down in summer from some five or six miles up the stream, in large scows fifty or sixty cords to the load. The scows are towed by a small steamboat that draws only three feet of water. In winter the wood is cut nearer to the forge (about two miles away) and hauled to it on the snow, and the wood near the forge is preserved for this purpose. It is almost all soft wood, nothing but pine and fir, and the trees are mostly rather small. The chopping is paid for at the rate of fifty cents (Swiss francs) a cord, and the wood is reckoned worth at the kilns eighty cents a cord. The wood cut up the river belongs properly to the Government, but the privilege of cutting it has been granted for the royalty of six cents a cord, which, however, has never yet been exacted.

There are ten charcoal kilns in a row beginning about a hundred yards from the wood landing place; but two of them are unfinished. The eight finished ones are in the shape of a cylinder at the bottom, with a dome shaped top. They are about thirty feet in diameter and twenty five feet high; have walls a foot thick; are built out of forty thousand bricks; and will hold a hundred cords of wood apiece, which yields four thousand bushels of charcoal. The two unfinished kilns are to have iron roofs instead of brick domes. Holes are left in the brick walls that may be closed with a single brick at will, to regulate the burning. The charging and emptying are done partly by a hatchway at the top, which is reached by a platform, and partly by a door at the bottom. The burning lasts twenty five or thirty days, and the charging and discharging are such that there is burning, or twelve burnings a year in each kiln. The 8 kilns would yield then about forty thousand bushels a month, or a little more than is needed for four forge fires. The charcoal is of very fine quality, much of it very beautiful, enough to make the eye of a chemist glisten. The ten kilns need eight men to load and unload them, two men to watch and a foreman, who receives other wages. The charcoal is reckoned to cost in all four cents and a half a bushel. Last year only six kilns and some pits of charcoal were used.

3

The ore is gathered on the beach within, say, half a mile of the works on either side. The shore is a sand beach for fifteen miles above Moisie and for ten miles below, and the land rises from the beach in three or four flat sandy terraces to a height of some sixty feet and then stretches back almost level some ten miles to the Laurentian mountains. Just above the beach the waves of great storms have cut the bank of half a dozen feet in height into low sand cliffs, in which are seen layers of blue black magnetic iron sand, from a mere film in thickness up to three inches or more. These layers are sometimes separated from each other by very thin films of lighter colored sand, sometimes by a few inches, with the greatest irregularity. It is said that the average of these sands, found by digging long trenches through them, contains fifteen per cent. of magnetic iron ore. In great gales the sea washes these sands and afterwards, as on the morning of the fifth of October, 1869, there are on the beach great patches of nearly pure ore, as pure as it could be washed by man. These patches are of irregular shape and size, perhaps a hundred yards long and half as wide, and at short distances apart all along the beach. They are of all thicknesses up to some three inches, and when you dig through the layer of light colored sand below them, a few inches thick, you find other layers of ore below. In fact there is the same irregularity in the composition of the beach as in the sand bank above. After every gale there are fresh patches of ore on the beach, and the supply seems inexhaustible. A single patch a hundred yards long by fifty wide and averaging two inches thick should yield about seven tons of ore. The ore is gathered at favorable times after the storms and piled up in heaps on the bank out of the reach of the waves. The experiment has been successfully tried of heaping up the poor sand below high water mark and letting a common tide wash it. The first year the ore was noticed its amount was immense, much greater than has ever since been seen on the beach at any one time. It is said that the sand has been found to have an average of a dollar's worth gold in it to the ton.

In taking the ore of course some impurities are dug up also, so that it has to be washed before smelting. The unwashed ore has but per cent. of pure ore; the washed about per cent. The most troublesome impurity to remove is

garnet sand, which is common here and is heavier than the other sand is mixed with the ore. The washing is done on a shaking table about twenty feet long and four feet wide carried by four pairs of flanged wheels upon four rails crosswise of the table, and moved sideways some [illegible] inches back and forth by two rods joined to small cranks on a small bit of shafting. The table slopes gently towards the tailing end, and the bottom is about an inch and a half lower in the middle than at the sides. There are sides about six inches high, but the lower end is open. A workman with a wooden hoe pushes the sand up and down on the table as it shakes, until the impurities are washed away. The washing is not done at night; and one table supplies four forge fires for twenty four hours, that is, say, tons of ore, [illegible] working ten hours, and needs two men besides a boy to wheel in the ore. There are two such tables in the room adjoining the one where the forge fires are, and there is a fifteen horse power steam engine to run them. Near the washing machines is a water wheel some eighteen feet in diameter by two or three feet wide; and a wooden aqueduct some two feet [illegible] by [illegible] feet deep, on trestles, brings water to it from a [illegible] [illegible] [illegible] off. The wheel was put up to run the washing machine, but the water failed in a dry season, and the small steam engine was put up to take its place, and the wheel is idle. This last year, however, the water has been quite plenty enough. — The washed ore is [illegible] in wheelbarrows and thrown into a heap between each pair of [illegible].

There are [illegible] forge fire places all alike; but two are unfinished and only four are in use now. They have a cast iron frame, [illegible] are three feet square and high, closed by a plate in front for a foot from the bottom, with holes in the plate for the escape of the slag, and with a shelf or hearth at the top of the plate, [illegible] on a level with the tweer. The tweer is at the side of the fire, has a nearly semicircular section with a radius of an inch, and is inclined at an angle of about fifteen degrees. The blast is heated in passing through two long pipes like inverted U's set side by side in a chimney over the fire. These pipes are about eight inches in diameter and rise about eight feet above the fire place. The heat of the blast is not known exactly, but the pipes are

[illegible] shed, which is common on the road to [illegible]. Here the [illegible] [illegible] with the [illegible]. The washing is done on a [illegible] [illegible] carried by four pairs of [illegible] the table and [illegible] by the [illegible]. The table [illegible] the [illegible] is about [illegible] in the middle [illegible]. There [illegible] high, but [illegible] up and down on the [illegible], until [illegible] are washed away: the washing is [illegible] and [illegible] [illegible] [illegible]. There are [illegible] [illegible] the [illegible] [illegible]. Here the washing [illegible] is a [illegible] [illegible] feet wide; and [illegible] [illegible] [illegible] [illegible] the washing [illegible] [illegible] and the [illegible] [illegible] [illegible] [illegible] [illegible]

There are [illegible] all alike; but two are unfinished and only four are in use now. They have a [illegible] frame, a [illegible] three feet square and high, standing on a plate [illegible] for a foot from the bottom, with holes in the plate for the escape of the [illegible] and with a [illegible] at the top of the plate [illegible] with the [illegible]. The [illegible] is at the side of the fire, [illegible] [illegible] at an angle of about fifteen degrees. The [illegible] [illegible] through two [illegible] [illegible] side by side in a chimney over the fire. These [illegible] are about eight inches in diameter and rise about eight feet above the [illegible]. The [illegible] of the [illegible] [illegible], but the [illegible] are

said to be red hot. The air is brought to the fires by a large pipe a foot and a half in diameter from a pair of blowing cylinders in the next room. Each cylinder is about seven feet long and four feet in diameter, is double acting, and gives about two double strokes and a half every minute. The pressure of the blast is about one pound to the square inch. The blowing cylinders are run by a steam engine of about thirty-five horse power.

The forge process is the same as that in use about Ogdensburgh, the region from which the master bloomers of Moisie came. The ore is all thrown on the fire in small quantities from time to time according to the judgment of the bloomer, until at the end of three hours he has gathered together a loop of about two hundred pounds and some eighteen inches across and six inches thick. The loop is then taken to the hammer and hammered first into a shape about six inches square and two feet long, while the slag runs out like juice from crushed grapes ~~[illegible]~~. It is then hammered into a bloom about four inches square and three feet long with a round bunch about six inches thick left at one end. This bunch is put into the fire again to be reheated while the other loops are hammered, and after that is hammered out into a bloom about two inches square and three feet long, and is then cut off from the larger bloom. Both are called blooms, although the second, smaller one has been hammered more than the first and is almost pure, or bar iron.

There are two horizontal trip hammers, one of them dismounted at present, and each weighs six tons and a half. A sixty horse power steam engine for hammering stands in the same room with the blowing machinery. Adjoining this room is a small machine shop with a lathe.

A reverberatory furnace is already built in the room where the washing is done, near the forge fires, and will be used for reheating the loop for the second hammering instead of putting it back into the forge fire.

The forge runs night and day except Sundays; and the forge fires need four bloomers and one man to bring in charcoal and one hammerman, six men in all, every shift of twelve hours.

as it is called. The air is brought through a large pipe a foot and a half in diameter from a pair of blowing cylinders in the next room. Each cylinder is about seven feet long and five feet in diameter, is double acting, and gives about two double strokes and a half every minute. The pressure of the blast is about one pound to the square inch. The blowing cylinders are run by a steam engine of about thirty five horse power.

The large furnace is the same as that in use about fifty [illegible], the [illegible] from which the [illegible] blooms of [illegible] ores. The ore is also thrown on the fire in small quantities from time to time, according to the judgement of the hammer, until at the end of three hours it has gathered together a loop of about two hundred pounds and some eighteen inches across and six inches thick. The loop is then taken to the hammer and hammered first into a shape [illegible] inches square and two feet long, while the [illegible] were [illegible] pieces from crushed [illegible] ~~[illegible]~~.

It is then hammered into a bloom about four inches square and three feet long with a round [illegible] at [illegible] left at one end. This bloom is put into the fire again and [illegible] while the other end is hammered. On [illegible] this is hammered out into a bloom about two inches square and three feet long, and is then cut off from the larger bloom. Both are called blooms, although the second, smaller, one has been hammered more than the first and is almost [illegible].

There are two [illegible] hammers, one of them the [illegible], and each weighs six tons and a half. It [illegible] [illegible] engine for hammering [illegible] in the [illegible] with the blowing machinery. Adjoining this room is a small machine shop with a lathe.

A reverberatory furnace is already built in the room where the working is done, near the forge fires, and will be used for heating the loop for the second hammering instead of putting it back into the forge fire.

The forge runs night and day, except Sundays, and the three fires [illegible] and the [illegible] [illegible] [illegible] hammermen, six men in all, every shift [illegible]

The bloomers are paid three dollars and fifty cents a ton of iron, except two of them brought from Ogdensburgh to teach the others and paid three dollars a day. The hammer men are paid a dollar and a half a day. Just now, besides the two master hammer men, two new men are learning to hammer and are paid, one a dollar a day, and the other seventy five cents. The four fires make each eight loops in twenty four hours, or all together about three tons of blooms a day. They began making iron near the end of October, 1857, and have made now some 1500 or 1800 tons, almost all of which is still on hand. At first only two fires were used; but last year for about six weeks six fires were in blast, the rest of the time only four.

The four fires need 1400 bushels of charcoal a day on the average, or 36400 bushels a month. A greater bulk of charcoal is needed than if it were heavier, that is made more from hard wood; but this lightness of the ~~charcoal~~ fuel is thought [illegible] a better quality to the iron. The charcoal is said to weigh [illegible] pounds to the bushel.

Near the charcoal kilns is a lime kiln. The limestone is brought from Seven Islands, about twenty miles off, and the lime is used for making mortar.

Bricks are made in a brick yard close by the forge and [illegible] material for them is found there in some layers of clay among the sands.

A very fine sixty ton iron screw steamer belongs to [illegible], and plies constantly between it and [illegible] or [illegible] throughout the season of navigation.

The land belonging to the iron works is about five square miles, of which about two is a peat bog. All foothold for grogshops is, therefore, kept at some distance from the forge and nothing stronger than spruce beer or tea is drunk there.

There are now in all eighty five men and boys [illegible] and twenty two horses employed by the concern. Last winter there were 250 men employed; about a hundred of them choppers who go back to the South Shore of the St. Lawrence

The Governor was paid three dollars and fifty cents a ton of iron, except [illegible] brought from [illegible] I think the [illegible] paid three dollars a day. The [illegible] were also paid a dollar and a half a day, [illegible], besides the [illegible] [illegible] were, the [illegible] are [illegible] [illegible] and are paid one a dollar a day, and the other [illegible] cents. The furnace [illegible] eight tons in twenty four hours, [illegible] together about three tons of [illegible] a day. The [illegible] [illegible] [illegible] the [illegible] of [illegible], [illegible] and [illegible] about 1500 or 1800 tons, [illegible] which is [illegible]. [illegible] only the pigs are sold; but that [illegible] [illegible] the pigs were in [illegible], the [illegible] [illegible].

The furnace [illegible] 1400 bushels of charcoal a day [illegible], or 36400 bushels a month. A greater [illegible] [illegible] than if it were [illegible], [illegible] [illegible] [illegible] [illegible] of the [illegible] [illegible] [illegible] [illegible]. The charcoal is [illegible] [illegible] of the [illegible].

[illegible] the charcoal [illegible] is a [illegible]. The limestone is brought from [illegible] Island, about twenty miles off [illegible] is [illegible] for [illegible] [illegible].

[illegible] is a brick yard close by the furnace [illegible] [illegible] for them is found that it [illegible] [illegible] of [illegible] the [illegible].

[illegible] five [illegible] the [illegible] [illegible] [illegible] [illegible] and [illegible] constantly [illegible] it and [illegible] [illegible] [illegible] the [illegible] of [illegible].

The land belonging to the iron works is about five square miles, of which about 600 is a [illegible]. All of it [illegible] [illegible] is, therefore, [illegible] at some distance from the [illegible] and nothing [illegible] [illegible] there.

There are now in all eighty five men and boys employed [illegible] and twenty two horses employed by the [illegible]. [illegible] there were 250 men employed: about a hundred of them [illegible] [illegible] of the [illegible]

7

for the summer. Nearly all the workmen come from there, and either arrive in schooners, or, when a large number is wanted at once, as for woodchopping at the beginning of winter, the steamer calls for them at some port agreed upon beforehand. In any case they pay their passage across.

The wages of common laborers vary from sixteen to twenty dollars a month, mostly about eighteen dollars, and they find their own board, which is eight or nine dollars (say eight and a half) a month. House rent is given free to those who take houses. Better workmen get from twenty to twenty five dollars a month. The wood choppers are thought to be well paid, at fifty cents a cord; for they can cut two cords a day, rarely three.

The supply of wood may be considered almost inexhaustible by any ordinary iron works; for the Moisie River comes down perhaps a hundred and fifty miles, wooded in most places along its banks and for some distance back. Although there are falls in its course, the wood could be floated down and caught by a boom below. The region through which the river runs is not only perfectly wild now, but must always be so in great part, as it is rocky and mountainous.

Of the climate.

Climate at Moisie on the shore of so large a body of water as the lower St. Lawrence is in the early winter milder than the climate of Montreal much further south. But the great body of drift ice that stays in the river and gulf until May makes the spring very backward. The summer is short, but plants grow fast in it and ripen quickly, so that fine potatoes, as well as oats and barley ripen well and the soil though rather sandy is not unfavorable. Snow does not come in any quantity until December or even Christmas, but the ice does not go until May.

There is, then, no navigation for five or six months in the year. The mail is carried on foot once a month through the winter about two hundred miles to Bersimis, the nearest post office on the north shore. The trip is made by the mailcarrier on snowshoes commonly in nine days, but sometimes in seven. He

[illegible] they sell the northern ones from thir-
ty eight [illegible] in Havanna, or where a large number is
wanted at once. at [illegible] at the beginning of
winter, the planters able for these [illegible] upon
the ground. [illegible]
The [illegible] of a common labourer being from sixteen
twenty dollars a month, making about eighteen dollars per
[illegible] which is eight or nine dollars [illegible]
[illegible]
[illegible]
[illegible]
a [illegible]

[illegible]
[illegible]
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[illegible]
There is, then, [illegible]
[illegible]
[illegible]
[illegible]
[illegible]

is paid eighty dollars for the round trip, mostly by the iron works, but the workmen pay twenty five cents for each letter they send.

The white population of this north shore is very thinly scattered, and almost wholly of French descent, and fishermen and hunters by occupation. There are scarcely a dozen horses within fifty miles of Moisie, up and down the shore, and there are none inland.

There are a few Indians of the tribe called Montagnaes that frequent this region; but through all the time except a short visit in the summer they are back in the mountains hunting. They sell their furs to the agents of the Hudson's Bay Company, which has a monopoly of all trade with them. Now and then one or two of the Mic Mac tribe of Indians come down from the north a couple of hundred miles, perhaps as guides to some French missionary. Two such Indians while paying a visit to Moisie saw a horse for the first time in their lives. They thought him some terrible wild beast and [illegible] of him. Away from Moisie horses are especially rare on this coast, and in the winter dogs are used to drag sledges. There are no roads except along the shore and a few rough footpaths or carries (portages) inland for canoe travellers. The rivers are indeed the great highways, for the woods are thick and hard to pass through, and the rivers head up so near each other that it is possible to go almost any where in a canoe with short carries.

is about eighty or ninety feet [illegible] the surrounding high, reaching by the river [illegible] [illegible] [illegible] [illegible] fine and for each little [illegible]

The whole population of this part here is very thinly scattered, and almost entirely of French descent and [illegible] and [illegible] by [illegible]. There are scarcely a [illegible] [illegible] within fifty miles [illegible], of and [illegible] [illegible] and [illegible] [illegible] [illegible].

There are a few [illegible] of the tribe called [illegible] [illegible] [illegible] the Region; but [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. They sell their furs [illegible] [illegible] [illegible] [illegible], which has a [illegible] of all [illegible] with them. [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] a [illegible] of [illegible] [illegible] [illegible], perhaps [illegible] [illegible] [illegible]. [illegible] [illegible] [illegible] a [illegible] [illegible] [illegible] a [illegible] [illegible] for the first time in their [illegible]. They [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. There are no roads [illegible] along the shore [illegible].

On revision of the inventory of the Union Car and Manufacturing Company, 9 Sept. 1869, found:

<u>Borrowed</u>:

1 Pick and 1 new shovel, by Mr. G. F. Power.

4 Three-part wooden flasks, by Chambers. } ["Returned" 8 Nov. 1869.]

2 Iron flasks, by Connard & Murray. }

1754 lbs. Railroad iron, light pattern, by Allison & Co.

<u>Sold</u>:

7,214 lbs. New wrought iron

22,982 lbs. { 18,200 lbs. { Cast iron / Cast scrap

{ 4,782 lbs. Pig iron

301 lbs. Wrought scrap.

Whole stock of Housework and other patterns.

<u>Missing</u>:

17 Railroad ties $3.50 – Sundry pieces old [illegible] 10.00

Pieces of timber on floor of smith's shop 2.00

Steel (new) 42 lbs @ 12¢ 5.04 – 2 gross machine screws @ 75¢ 1.50

1 Pair callipers – 1 Axe handle 12¢ – 1 Auger [illegible] – 1 hammer

1½ gallons lard oil – 1 Pair pinchers – 1 Pair callipers 75¢

Office Railing wood 1.50 – 10 ft. of 4 in. Belt @ 37¢ 3.70 – hammer [illegible]

The 6 in, 8 in ¼ Bend Pipe patterns & core boxes, also core boxes of the 4 in, 12 in do. do. do.

1 Spring bolt 50¢ – 3 lb. Brass wire, about No. 18.

On examination of the inventory of the Union Car and Manufacturing Company, 9 Sept. 1869, found:

Borrowed:

1 Pick and 1 new Shovel, by Mr. E. F. Power.

4 three-inch wooden planks, by Chandler. } [Returned 8 Nov. 1869]

2 [illegible] planks, by Conrad & Murray. }

[illegible] Railroad store, eight patterns, by Allen Co.

Sold:

1,214 lbs. New wrought iron

Cast iron } [illegible]

Cast scrap } 11,928 lbs.

4,702 lbs. Pig iron

30 lbs. wrought iron scrap.

Lot of [illegible] and other patterns.

Missing:

17 Railroad ties @ 5 — [illegible] piece [illegible] 10

Piece of timber on [illegible] 25

[illegible] — [illegible]

4 Pair Callipers — 1 [illegible] 12 — 1 [illegible] — Hammer

1½ gallon bucket — 1 Pair pincers — 1 Pair callipers 75

Office Railing [illegible] — 10 ft. of [illegible] @ 37½ 1.25 — Hammer

The [illegible] — [illegible] patterns [illegible]

The [illegible] &c. &c.

1 [illegible] — [illegible] about [illegible]

[illegible] South Fifth Street, Philadelphia, [illegible] 12 Nov. [illegible]

C. C. [illegible] Esq.
New York.

My dear Sir:

Your favor of day before yesterday came duly [illegible]. You will find [illegible] in the [illegible] as well as [illegible] all the cars [illegible] upon [illegible] passenger cars, three hand cars, one truck and [illegible] baggage cars. [illegible] is quite unfinished [illegible] [illegible] in the Carpenter [illegible] [illegible] [illegible] [illegible] [illegible] and [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] passenger cars and the [illegible] [illegible] [illegible] [illegible] [illegible] and write [illegible]

[illegible] [illegible] [illegible] [illegible] would appeared pretty well [illegible] [illegible] [illegible] [illegible] [illegible] differently. [illegible] [illegible] [illegible] [illegible] and [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] carpenters [illegible] [illegible] other articles [illegible] be found somewhere [illegible] shops.

I [illegible] [illegible] ever returned or paid for [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] same [illegible] paid.

Very truly yours, Benj. Smith [illegible]

185 South Fifth Street Philadelphia; [illegible]

R. C. [illegible] Esq.

New York.

My dear Sir:

Your favor of yesterday is at hand.

I have seen Mr. [illegible] this morning, and he says he will take [illegible] of the [illegible] [illegible] paid and that appears to have been paid [illegible] and [illegible]. You were yourself under [illegible] the other day [illegible] that the two payments [illegible] [illegible] those of January and April and not that of October. Mr. [illegible] [illegible] when he [illegible] up the books that summary [illegible] one of the payments had been paid twice by oversight.

I [illegible] [illegible] all the [illegible] with the inventory as [illegible] yesterday reached you safely [illegible] [illegible]

Very truly yours,

Benj. Smith [illegible]

13 South Fifth Street, Philadelphia; 15 Nov. '69.

C. C. [illegible] Esq.

[illegible]

My dear Sir:

[illegible] is at hand. It must be that [illegible] with [illegible] you; for in it I answered the question [illegible] about the ground rent I paid. It amounted [illegible] to \$ 3[illegible], and I also paid 25¢ for getting the New York [illegible] to the [illegible], making in all \$ 53.85. The balance [illegible] which Mr. [illegible] had sent me, namely \$ 5[illegible].65 I returned [illegible] in New York. — I hope the inventory is [illegible] can make another [illegible] a few trifling items were added [illegible].

I [illegible] the affair of the lumber [illegible] He [illegible] of [illegible] and [illegible] removal [illegible] at [illegible] of cutting, but [illegible] bought the [illegible] for seventy dollars, which [illegible] 1869. The lumber was old stuff [illegible] lying in piles [illegible] ground, and was [illegible] Mr. [illegible] in the inventory. — [illegible] the railroad iron [illegible] was weighed by [illegible] Sept. [illegible] 2160 lbs. [illegible]. Joseph Bales, the [illegible] me [illegible] on the [illegible] the last entry [illegible] cash [illegible] have [illegible] balance against Mr. [illegible] of \$ 1.35, and [illegible] of nothing [illegible] or [illegible] but you [illegible] than [illegible].
— It [illegible] that the walls of the [illegible] building should be [illegible] before the [illegible]. They [illegible] now [illegible] the weather [illegible] more [illegible] to [illegible]. They say that the water has already eaten [illegible] the bottom of some of the foundation piers; [illegible] the whole thing may be falling [illegible].

I have not seen [illegible] Mr. [illegible] today as he has been [illegible] in Court, and I could not find him there [illegible] Mr. Adams [illegible] yours [illegible] home [illegible] very truly, yours. Benj. Smith Lyman.

[illegible] South Fifth Street, Philadelphia; 15 Nov. 1879.

Benjamin Lyman Esq.,
Montreal.

My dear Sir:

Your favor of the eleventh is at hand today with the enclosed [illegible] of eighty dollars and the receipted bill. I am very much obliged indeed for all the trouble you have taken in the matter. As to the amount of the balance I am only afraid it should have been [illegible] dollars less; yet you do not seem quite certain of the amount you took from me, and for my part I made no note of it and do not clearly remember whether it was $57 or $75. But I trust it is all right, or if not, that I may be able to make it so.

I called to see you the day you left here and found you had gone [illegible] hour. I feared that your daughter might still be sick, but am glad to hear that you all arrived safely in Montreal. You have certainly left some of our fine sights here still to see on another visit, and I trust that you may all come again soon to see them. The city is not rich in sights for a city of its size, but is remarkable rather for the comfort with which poor people live here. There is an average of one house to about six inhabitants, and though many of the houses are very small, almost every family has its [illegible]. [illegible] and food are both comparatively cheap. Rents are low [illegible] the city can spread so easily in almost every direction, and is so level that no streets nor quarters are greatly better than many others. Food is cheap and good because the country around the city is so fine a farming region. You went near to some of the fine Chester County farms in going towards Germantown; but you should have gone still further that way.

I start tomorrow morning for Northampton to spend Thanksgiving there like a faithful Yankee. It is a week earlier than common this year, but the season seems quite as far advanced as it usually is Thanksgiving week. It seems [illegible] to hear you speak of sleighing already in Montreal.

I [illegible] thank you as your son also for forwarding me a newspaper [illegible]. Please give my best regards to him and to your [illegible] and daughter, and believe me always

Very truly yours. Benj. Smith Lyman.

135 S. [illegible] St., Philadelphia, 23 [illegible] 1869.

[illegible] Esq.

My dear Sir:

[illegible] the enclosed letter written [illegible] back. [illegible] just as I was [illegible] [illegible] from Clifton Springs, and [illegible] more successful [illegible] you find it necessary to [illegible] [illegible] to think it desirable to [illegible] the doctors and medicines, but [illegible] and perhaps [illegible] [illegible] of the different [illegible]

[illegible] you will soon be out of the doctors' hands [illegible] that they find you too profitable a [illegible] on keeping you ill all the time. [illegible] who had also some to pass [illegible] said it would be [illegible] [illegible] you will [illegible] [illegible] and [illegible] [illegible] His address is: [illegible] Life Insurance Company [illegible]

[illegible] [illegible] all gathered together [illegible] make a great deal of. The day is [illegible] much the same as [illegible] English, a day [illegible] [illegible] more and more. [illegible] in our childhood [illegible] very little [illegible] here.

Hoping to [illegible] your restoration to health, I remain

Very truly yours

Benj. Smith Lyman.

135 [illegible] Philadelphia, 23 [illegible]

Edward R. [illegible],
San Francisco.

My [illegible]:

Your favor of the [illegible] of [illegible] month came duly to hand, and [illegible] glad to learn by it that you had the [illegible] of [illegible] [illegible]. I am much obliged to you for your kind [illegible] offering to [illegible] dispose of my [illegible] Compass in California; [illegible] [illegible] [illegible] [illegible] [illegible] you [illegible] as to put this in your hands without any [illegible] prospect of a sale. If you should [illegible] [illegible] one [illegible] to buy the [illegible] [illegible] [illegible] [illegible] [illegible] description which [illegible] given [illegible] [illegible] or [illegible] [illegible] [illegible]. But [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. If you find it perfectly [illegible] [illegible] to [illegible] away a little time some day by calling [illegible] [illegible] [illegible] [illegible] [illegible] and [illegible] [illegible], [illegible] [illegible] of the Merchants Exchange opposite the Post Office and [illegible]. The Compass is in good order and has been little used [illegible] condition. The [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] new, and it [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] it is better than when new, for [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] for measuring with a [illegible], and there [illegible] [illegible] [illegible] [illegible] [illegible], so that they can be made to [illegible] a [illegible] [illegible] [illegible] ~~[illegible]~~ [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] is [illegible] very [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible].

[illegible]

[illegible]

My dear Sir:

[illegible]

Since I last wrote you I have made a journey [illegible] [illegible] [illegible], some four hundred miles northeast of Quebec, on the North Shore, what used to be called the Labrador Coast, & took [illegible] some [illegible] [illegible] [illegible]. Among other places I saw there was Moisie where they make iron from iron sand found on the beach. If you see the [illegible] Engineering and Mining Journal the old Journal of Mining [illegible], you may find in it [illegible] an account of the Moisie iron works. [illegible] [illegible] was [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] places in that [illegible] [illegible]. [illegible] a very interesting [illegible] [illegible] [illegible] [illegible] [illegible] on many accounts. [illegible] [illegible] [illegible] [illegible] in a [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] of it. But the geology, the scenery and [illegible] [illegible] were all new to me and very interesting. I [illegible] [illegible] in Lower Canada not even at Montreal and [illegible] [illegible] gone from home five weeks; and had been [illegible] [illegible] [illegible] three weeks, when I went [illegible] [illegible] [illegible] a few days at Thanksgiving. All my [illegible] [illegible] [illegible] were gathered together there and [illegible] [illegible] good [illegible] [illegible] [illegible]. On my way [illegible] [illegible] I spent [illegible] [illegible] Springfield and arrived here yesterday. — [illegible] [illegible] [illegible] yesterday evening [illegible] [illegible] [illegible] [illegible] [illegible], who is Freshman now at Cambridge and [illegible] [illegible] [illegible] [illegible] [illegible], and [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. [illegible] [illegible] [illegible] [illegible] [illegible] by [illegible] students. [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] my comfort [illegible] Chestnut Street, three doors [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] Road & Mining Register, as [illegible] [illegible] [illegible]

Ly yours Benj. Smith Lyman.

135 South Fifth Street, Philadelphia; 27 Nov. 1869.

Prof. Joseph Henry,
Washington.

My dear Sir:

I have to thank you very much indeed for the kindness of your letter yesterday introducing me to Mr. Thornton. It seemed with its accompanying letters to have great weight with him; but he was unwilling to decide the matter for two or three days yet, so that he might hear further from somebody else who had been recommended to him for the place in question. Still, I have come home so strong in the belief that in spite of my shortcomings he will find no available man better fitted on the whole than myself for this purpose, that I am going to carry out his suggestion of going right away to the oil regions, so as to perfect myself in some of the details where my experience has left me a little deficient. I have hopes of accomplishing this satisfactorily within a very few days, after what I have had to do already in the way of boring; perhaps as soon as [illegible] would be ready to write me at any rate.

Thanking you again most heartily for your kindness, I remain

Very respectfully yours. Benj. Smith Lyman.

133 North Fifth Street, Philadelphia, 27 Nov. '69.

Prof. Joseph Henry,
Washington.

My dear Sir:

I have to thank you very much indeed for the kindness of your letter yesterday introducing me to Mr. Harrison. It seemed with its accompanying letter to have great weight with him; but he was unwilling to decide the matter for two or three days yet, so that he might hear further from somebody else who had been recommended to him for the place in question. Still I have some hope nothing in the delay that in spite of my shortcomings he will find no suitable man better fitted on the whole than myself for his purpose. But I am going to carry out the suggestion of going right away to the coal regions, so as to qualify myself in some of the details where my experience has left me a little deficient. I have hopes of accomplishing this satisfactorily within a very few days, after which I have but to [illegible] already in the way of [illegible]; perhaps as soon as [illegible] would be ready to write me advantageously.

Thanking you again most heartily for your kindness, I remain
Very respectfully yours, Benj. Smith Lyman.

135 South Fifth Street, Philadelphia; 27 Nov. 1869.

His Excellency Edward Thornton
British Ambassador &c. &c.
Washington.

Sir:

It seems to me since leaving you that with the experience I have already had in boring wells it will be possible for me to get a satisfactory knowledge of the most important details that I lack in even less time than I mentioned to you, say in three or four days. The advantage of staying longer in the oil region would not perhaps be worth the delay under the circumstances, since it is not likely that the work in India would be helped forward much thereby. My own opinion is, however, that in spite of my shortcomings you will hardly be able to find any other available man as well fitted on the whole for the business in question; and I shall, therefore, as you suggested, go at once to the oil regions, and will await your pleasure there. If you will have the goodness to address me in the care of Prof. J. P. Lesley, Secretary of the American Philosophical Society, No. 4 South 5th Street, Philadelphia, he will not only forward your letter to me, but will telegraph me at the same time so as to hasten matters.

It seems after all hardly worth while to take boring tools from here to India, for the government has no doubt superior facilities for getting work done promptly in the machine shops there, and the expense would also be less.

I have the honor to be

Your Excellency's
Most obedient servant

Benj. Smith Lyman.

284

137 North Eighth Street, Philadelphia, 27 Nov. 1869.

His Excellency Edward Thornton.
British Ambassador &c. &c.
Washington.

Sir:

It seems to me since leaving you that with the experience I have already had in boring tools it will be possible for me to get a satisfactory knowledge of the most important details that I think in less time than I mentioned to you, say in three or four days. The advantage of studying borings in the oil region would [illegible] be worth the delay under the circumstances, since it is not likely that the [illegible] Indian [illegible] would be helped forward much thereby. Any unofficial [illegible] [illegible] you will kindly [illegible] Kind any other available means as well [illegible] for the business in question, and should they [illegible] suggested [illegible] of the oil region, and will await your pleasure here. If you wish some references to gentlemen [illegible] of the American Philosophical Society [illegible], [illegible] will not only forward your [illegible] but will [illegible] at the same time [illegible] [illegible].

Pray excuse [illegible] I am only with this [illegible] of leaving the [illegible] government [illegible] for getting [illegible] promptly in the machine [illegible] [illegible] the expense would be less.

I have the honor to be

Your Excellency's

Most obedient servant

Benj. Smith Lyman.

35 South Fifth Street, Philadelphia; 27 Nov. '89.

[illegible]

After leaving you a week ago I arrived safely in Springfield [illegible] behind time by reason of delays to the trains [illegible] Hometown. [illegible] [illegible] I went [illegible] Springfield until [illegible] [illegible] I [illegible] [illegible] and [illegible]. [illegible] Frank [illegible] [illegible]. By [illegible] at his [illegible] [illegible] On going [illegible] evening [illegible] and [illegible] important information [illegible] [illegible] [illegible] for [illegible] the [illegible] old regime [illegible] and [illegible] recommended me [illegible] grand [illegible] purpose. On [illegible] the gentleman Mr. [illegible] came to see me [illegible] work [illegible] for [illegible] — Mr. Lesley and [illegible] Mr. [illegible] who is a [illegible] [illegible] or [illegible] and is [illegible] daughters, and [illegible] [illegible] [illegible] [illegible] [illegible], as [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible], as [illegible] [illegible] [illegible]

It seems to that somebody else had been highly recommended [illegible] him, although he wonders if this man could go or would be willing, and Mr. Thornton [illegible] therefore to leave the matter undecided for two or three days longer. He recommended me to go at once to the oil regions on the chance of my being chosen for the mission, and he seemed to think it quite likely that he should choose me after all. The engagement would be for one year with the option of keeping me two years, if the [illegible] should [illegible] require it. The salary would be fifteen hundred dollars a year. The oil regions are pretty widely scattered in India, in Burmah, Siam, the Punjab, and perhaps else where [illegible], without being unconscious of my shortcomings [illegible] [illegible] can readily be found who will on the whole be so [illegible] [illegible] as myself so I have strong hopes of having it [illegible]. For that reason I am going right away tomorrow night [illegible] Sunday [illegible] all [illegible] as fast [illegible] if I [illegible] [illegible] to the oil regions, the main one in [illegible] County in this State, with the expectation of hearing from [illegible] within a very few days. The knowledge I shall get will be serviceable to me even if I should lose the chance of seeing [illegible] oil regions of India. If my services are wished for I am to go at once [illegible] sign the contract and then set off as soon as possible [illegible] [illegible] from today, or even sooner. The only trouble [illegible] [illegible] journeys is that I have no money for them and am [illegible] [illegible] from Mr. [illegible] as he thinks them highly important. [illegible] not very convenient for him to let me have the money and if you could conveniently lend me a hundred dollars now it would be a great kindness to me, and then I can repay him what I owe. And I shall be away from home for three or four days, perhaps more [illegible] [illegible] perfectly if you send it here by this time. In case I should go to India I should be glad if you could let me have [illegible] another fifty dollars a few days after that. As the pay is payable [illegible] I should [illegible] soon be able to refund not only these [illegible] but all [illegible] that you have already furnished me so kindly. Even if I do not go to India I have hopes of doing better in business here [illegible] [illegible] is said to be coming on [illegible] for the [illegible] [illegible] [illegible]. Besides that, there is one or two smaller [illegible] [illegible] and I feel pretty confident [illegible] [illegible] to India would be by way of the Mediterranean and Suez. [illegible]

Give my love to [illegible] [illegible] Your affectionate son, Benjamin Smith Lyman.

[illegible]

[illegible] Street, Philadelphia; Dec. [illegible]

Hon. [illegible] Esq.
British Minister [illegible]
Washington.

My Dear Sir,

Your journey [illegible] is at hand; and a conference with [illegible] would [illegible] you in Washington [illegible] Wednesday [illegible].

I remain

Very respectfully
Your Excellency's
Most obedient servant.
[illegible] Smith [illegible]

13 [illegible] Street, Philadelphia; 6 Dec. 1867.

Dear Father:

Your kind [illegible] of the thirtieth with its enclosed check for a [illegible] yesterday morning from the [illegible] and I am very much obliged to you.

This morning I [illegible] a [illegible] from the British Minister saying that [illegible] and sign the contract, and [illegible] as soon as possible [illegible]. I am going therefore [illegible] probably [illegible] here again [illegible] night. I have not yet quite decided at what time I can sail, but as they are very [illegible] go at the earliest possible moment [illegible] the winter is the most available time for work there and it will [illegible] for the journey, I think I will sail either [illegible] or on Wednesday of [illegible] line, also a fine steamer. [illegible] would [illegible] in time to catch the steamer from [illegible] December, [illegible] saving the time [illegible] therefore in the two ways [illegible] of Marseilles) of nearly [illegible]

I can easily get myself ready to go by Saturday, [illegible] my [illegible] which I am [illegible] to keep [illegible] besides. [illegible] would not go to [illegible] have seen me so lately [illegible] especially as the visit [illegible] perhaps only for [illegible] night. [illegible] arrangement, I [illegible] you [illegible] point of view [illegible] directly. [illegible] that it might [illegible] and help [illegible] getting [illegible] the [illegible] Indian job. [illegible] as [illegible] before [illegible]

will have it worked at [illegible] Thursday or Friday after I get back from Washington and they will put two or three men at it, so that it can be got [illegible] done. With the model done I can, I think, get a patent [illegible] my compass [illegible] as nothing more will be needed but a drawing and a description in writing, all of which I could send by mail from [illegible]. It may help me a little in my business when I get home to have such this instrument made and in use a year or so already, so as to begin to be a little known.

As to my pay while gone I think there is no reason to be uneasy, for my employment will be [illegible] British East Indian government, and the [illegible] payments are to be monthly according to the contract. In fact the certainty of the pay is one of the attractions of the job. It will no doubt furnish me with something at the outset for my travelling expenses [illegible], but whether or not the [illegible] will be [illegible] necessary for that I do not know. To be safe, therefore, I should be very much obliged if you would send me the fifty dollars that I spoke of and that you [illegible] so kindly; although I have hopes of getting along without using it.

My trip to the oil regions was quite satisfactory and in many respects very agreeable, but in others somewhat uncomfortable. The weather being stormy every day, moreover, the roads almost inconceivably muddy a part of the time, the hotels crowded so that I slept one night in a small room with three other [illegible] in the same bed with me. You see I was in two places where there is even now as much excitement as there was [illegible] in 18[illegible] in the places that were famous then. We at the East are apt to think that the oil excitement is all gone and that little boring is done; but they say out there that at least five times as many wells are boring now as five years ago, and oil, oil, oil is the all absorbing theme there. The yield of oil is as great now as ever or greater, but the wells are much smaller [illegible] daily yield; so there must be many more than formerly. I fell in almost everywhere with very nice good natured people, and saw an unusual number of interesting faces.

In [illegible] while writing before I neglected to ask you especially to thank [illegible] me. [illegible] very much [illegible] for the nice [illegible] just [illegible] my wardrobe lacked; but [illegible] will keep me in handkerchiefs all the time.

[illegible] love to all. Your affectionate son. Benj: Smith Lyman.

until now I worked at night Thursday or Friday after I get back from [illegible] and then [illegible] back to [illegible] at it, so that I can [illegible] there. But it would do [illegible] I am, I think, after getting [illegible] my [illegible], so nothing more will be needed but a [illegible] and a [illegible] in writing, all of which I could send [illegible] from [illegible]. [illegible] a little in my [illegible] [illegible] there and this instrument [illegible] [illegible], so as [illegible] a little known.

[illegible] I think there is no reason the [illegible] British [illegible] government, and the [illegible] I feel the [illegible] I will not doubt [illegible] [illegible] necessary for that [illegible]. To be safe, therefore, I should be very much obliged if you would send me the fifty dollars [illegible] so kindly; although I have hopes of getting along [illegible].

[illegible] not quite satisfactory and in many [illegible] [illegible] Here the [illegible] is too [illegible]. There is even now no recent excitement [illegible] [illegible] much [illegible] peace.

[illegible]

Your affectionate son, Benj. Smith Lyman.

[For the United States Rail Road and Mining Register.]

Most men are under the impression that the oil fever has died away entirely and that little or nothing is done in the way of oil boring compared with what was doing five years ago. But the visitor to the Venango Oil Region is surprised to be positively assured by well informed men there that there are at least five (if not ten) wells boring now for one that was boring then. It is clear, too, that the number of producing wells now must be far greater than they were then; for the average yield of each well now is much less than it used to be, and yet the daily yield of the whole region is some 12000 barrels. Five years ago a two hundred barrel well was thought a small affair; now it is the wonder of the whole region; and even the famous Red Hot Well (five miles south east of Titusville) is said to yield but 140 barrels a day.

There are just now two great centres of excitement in the oil region: Parker's Landing and Lawrenceburg, in the south; and Shamburg, in the north. Hundreds of wells are going down at each of these places.

Parker's Landing and Lawrenceburg, close by, are on the west side of the Allegheny River about forty miles below Franklin, fifteen above Brady's Bend, and three below the mouth of the Clarion. The new place answers exactly to the description of Oil City and other centres of excitement as they were five years ago. The same swarms of men all bent upon one business; the same turning of all talk upon oil and oil boring; the same overcrowded state of the hotels, even the same mud knee deep.

All the oil from the wells here is carried across the river to the railroad by one or two iron pipes; so that the yield of the producing wells about seventy five in number is well known to be 1100 or 1200 barrels a day, or an average of about fifteen barrels a day to each well. The greatest yield of any well is some sixty barrels a day; but, though the wells are not large, it is claimed that very few are wholly "dry." They are about eight hundred feet deep on the river flats; but a large share of them are bored on the sides and top of the bluffs, and are therefore one or two hundred feet deeper than that. The rock in which the oil is found is called by some the fourth or fifth sand rock; but others maintain with more apparent reason that it is the same

[For the United States Rail Road and Mining Register.]

It will be seen as under the impression that the oil fever has died away entirely, and that little or nothing is done in the way of oil boring compared with what was doing five years ago. But the visitor to the Petroleum region, is surprised to be positively assured by well informed men there that there are at least five (if not ten) wells boring now for one that was boring then. It is claimed, too, that the proportion of productive wells now would be far greater than they were then; for the average yield per well now is much less than it used to be; but yet the daily yield of the whole region is some 12000 barrels. Ten years ago a two hundred barrel well was thought a small affair; now it is the wonder of the whole region; and even the famous [illegible] well (five miles back of Titusville) is said to yield but 150 barrels a day.

There are just now three great centres of excitement in the oil region: Parker's Landing and Brownsburg [?], in the south; and Pleasantville [?], in the north. Hundreds of wells are going down at each of these places.

Parker's Landing and Brownsburg [?], close by, are on the west side of the Allegheny River about forty miles below Franklin, (fifteen above Brady's Bend, and three below the mouth of the Clarion). [illegible] answers exactly the description of the oily other centres of excitement as they were five years ago. The same swarm of men all bent upon one business, the same topic of all talk upon oil and oil boring, the same overcrowded state of the hotels, even the same mud knee-deep.

All the oil from the wells here is carried across the river to the railroad by one or two pipe lines; so that the yield of the producing wells about twenty five in number is well known to be 1100 or 1200 barrels a day, or an average of about fifty barrels a day to each well. The greatest yield of any well is [illegible] barrels a day; but though the wells are not large, it is claimed that very few are wholly dry. They are about [illegible] hundred feet deep on the river flats; but a large share of them are bored on the sides and top of the bluffs, and are therefore one or two hundred feet deeper than that. The rock in which the oil is found is called by some the fourth or fifth sand rock; but other [illegible] that it is the same

third Sand Rock that has been so productive further north, on Oil Creek, at a depth of five or six hundred feet, and that it is merely deeper one from the [illegible] southerly dip. It is found seven hundred feet below the river at Scrubgrass (sixteen miles above Parker's) eight hundred feet at Parker's, and eleven hundred at Brady's Bend. At Brady's Bend there are two wells yielding together eight barrels a day, and two wells going down, one already 1060 feet deep and the other 860 feet deep; and these are the southernmost producing wells of the region.

In the northern part of the region, some six miles south-east of ~~the~~ Titusville is Shamburg, close by Pleasantville; and here the excitement is perhaps even greater than at Parker's, since the best wells yield a much larger amount, even up to two hundred barrels a day or thereabouts. It is said that preparations have ~~been~~ made for sinking a great many new wells here except ~~[illegible]~~.

The methods used in boring are constantly changing, and are in some respects quite different now from what they were five years ago, although the same in the main. The derricks [illegible] higher and wider, as the wells are generally deeper, [illegible] [illegible] larger and heavier. Wells are bored quicker now [illegible] [illegible]; instead of five or six months, a well is now bored nine hundred feet deep in forty five to sixty days. The crude oil is no longer shipped in barrels, but wholly in bulk, in large iron or wooden tanks on the railroad. The refined oil, however, goes in barrels.

The oil is generally found in a white coarse sandstone or rather pebble rock, but sometimes in a grayish one. A grayish rock seems generally to have little oil, because what gives the gray color is a mud or clay that fills up the larger pores and leaves less room for the oil and makes the rock less pervious to it. Where such rock yields oil, it may be on account of clefts in it.

It is strongly maintained by some that the producing wells lie in belts that run northeast and southwest; for example, that the half dozen or more producing wells at Scrubgrass are in the same belt as Tidioute, and that the [illegible] is some two miles wide at Scrubgrass, although mainly productive on[illegible] for a width of 400 [illegible] [illegible]0 feet. Others insist that even some of the large wells are [illegible] these belts.

[1358 [illegible] [illegible] Phila[illegible] [illegible]]

the oil Sand Rock that has been so productive further north, although at a depth of five or six hundred feet, and that is merely deeper as from the [illegible] northerly dip. It is found eleven hundred feet below the river at Franklin (eighteen miles above Parker's) eight hundred feet at Parker's, and eleven hundred at Brady's Bend. At Brady's Bend there are two wells yielding together eight barrels a day, and two wells going down, one already 1050 feet deep and the other 800 feet deep; but these are the northernmost(?) producing wells in that region.

In the northern part of the region, some big wells have lately been struck at Titusville in [illegible], also by Pleasantville; and here the excitement is perhaps even greater than at Parker's, since the first wells yield a much larger amount, even up to two hundred barrels a day or thereabouts. It is said that preparations have been made for sinking a great many new wells this coming summer.

The methods used in boring are constantly changing, and are in some respects quite different now from what they were five years ago, although the same in the main. The derricks [illegible] higher and wider, as the wells are generally deeper [illegible] larger and heavier. Wells are bored quicker now [illegible] instead of five or six months, a well is now bored [illegible] hundred feet deep in forty five to fifty days. The crude oil is [illegible] shipped in barrels, but now mostly in bulk, in large iron or wooden tanks on the railroad. The refined oil is always exported in barrels.

The oil is generally found in a white or brown sandstone or [illegible] pebble rock, but sometimes in a grayish one; a grayish rock seems generally to have little oil, because when [illegible] the grey color is a [illegible] that fills up the [illegible] and leaves less room for the oil and renders the rock less porous [illegible]. When such rock yields oil, it may be an accumulation in it.

It is strictly maintained by some that the producing wells lie in [illegible] that run northeast and southwest; for example, that the [illegible] of producing wells at [illegible] run the same line as [illegible]; and [illegible] is the same two [illegible] wide at [illegible], although [illegible] [illegible] for a width of [illegible] 70 feet. [illegible] insist that even some [illegible] wells are [illegible] these belts.

[1874 [illegible]]

135 South Fifth Street, Philadelphia; 7 Dec. 1859.

My dear Sanborn:

I have been so constantly travelling since you were at Cleveland that I have neglected to write you. On arriving here after my charming visit at Springfield, I was told by Mr. Lesley that the British Minister at Washington had inquired of his friend Mr. Miller for some suitable man to go to India and survey the petroleum regions there and make borings after the fashion of our oil wells. Mr. Miller had applied to Mr. Lesley and Mr. Lesley recommended me so strongly that after my return Mr. Miller came to see me and recommended me to go to Washington to see Mr. Thornton and gave me a good letter to him. I went armed also with letters from Mr. Lesley and Mr. Frazer & Prof. Henry a particular friend of Mr. Thornton's, and Mr. Henry gave me a letter to him inclosing those he had received. Mr. Thornton seemed pretty well satisfied with those letters and with his interview with me but wished to leave the matter undecided a few days, as he had already begun some negotiations with somebody else who had been very highly recommended but whose willingness to go was in doubt. In the meantime Mr. Thornton recommended me to do right away what I wished to do before going on such a mission to India, namely, to make a visit to our principal oil region to pick up some of the smaller details of the method of boring there. So I set out for Venango County a week ago last Sunday night and after a satisfactory trip there got home again last Sunday morning. Yesterday, Monday, came a letter from the Minister saying that he would like to engage me for the work in question and to have me come on to sign the contract in Washington and to sail at the earliest moment possible. As I am going there this afternoon, and shall perhaps sail in the Persia next Saturday, or else in the Cuba next week Wednesday. My employer will be the British government for India; and the work will require travelling a good deal as the oil regions are widely scattered, in Burmah, Siam and the Punjab, if not elsewhere. The engagement is for one year, or two years, if they choose; but they think one year will be enough to finish the work. The winter is the only good time for the work, and that is why they are in such great impatience to have me start, for the [illegible] [illegible] [illegible] months in [illegible] [illegible] [illegible] — [illegible] to make [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. [illegible] [illegible] [illegible] [illegible].

13 North Eighth Street, Philadelphia, 7 Dec. 1874.

My dear Sanborn:

I have been so constantly travelling since you went [illegible] that I have neglected to write you. On arriving here after [illegible] with [illegible] Springfield, I was told by Mr. [illegible] that the British Minister at Washington had enquired of his friend Mr. Miller for some suitable man [illegible] [illegible] before him and made [illegible] after [illegible] [illegible] Mr. Miller had applied to Mr. [illegible] and Mr. [illegible] recommended me to them [illegible] Mr. Miller [illegible] saw me and recommended me [illegible] Mr. Thornton and gave me a good letter to him. [illegible] also with letters from Mr. [illegible] and Mr. [illegible] & Prof. Henry, particular friend of Mr. Thornton's, and Mr. [illegible] letter [illegible] he had received. Mr. Thornton [illegible] pretty well satisfied with these letters and with his [illegible] with me, but [illegible] [illegible] already before [illegible] [illegible] [illegible] recommended [illegible] Mr. Thornton [illegible] to do right [illegible] [illegible] [illegible] principal [illegible] [illegible] I set out for [illegible] County [illegible] morning [illegible] Wednesday [illegible] letter from the Minister saying that he would like [illegible] me for the work [illegible] [illegible]

[illegible]

135 South Fifth Street, Philadelphia:
9 Dec. 1869.

Edward Miller Esq.

My dear Sir:

I agreed yesterday with Mr. Thornton to sail from New York day after tomorrow on my way to Calcutta. I write not only to say that I feel very greatly obliged to you for the part you have taken in a matter that seems likely to prove of so much professional advantage to me; but to assure you that I should be most happy to take to your son there any letter or parcel that you would like to send. As I shall have to leave this city tomorrow evening and shall have to do a good deal of running about before that, I will say that I will be here from twelve to one, at least, tomorrow noon, in case you should like to have a personal interview with me.

I remain,

My dear Sir,

Very respectfully yours.

Benj. Smith Lyman.

137 South Eighth Street, Philadelphia:
9 Dec. 1869.

Edward Miller Esq.

My dear Sir:

I agreed yesterday with the [illegible] to sail from New York day after tomorrow on my way to Calcutta. I write not only to say that I feel very greatly obliged to you for the kindness in your note in a matter that seems likely to prove of so much professional advantage to me; but to assure you that I should be most happy to take along any letter or parcel that you would like to send. As I shall have to leave this city tomorrow evening and shall have to do a good deal of running about before that, I will say that I will be here from twelve to one, at least, tomorrow noon, in case you would like to have a personal interview with me.

I remain,

My dear Sir,

Very respectfully yours,

Benj. Smith Lyman.

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[illegible]